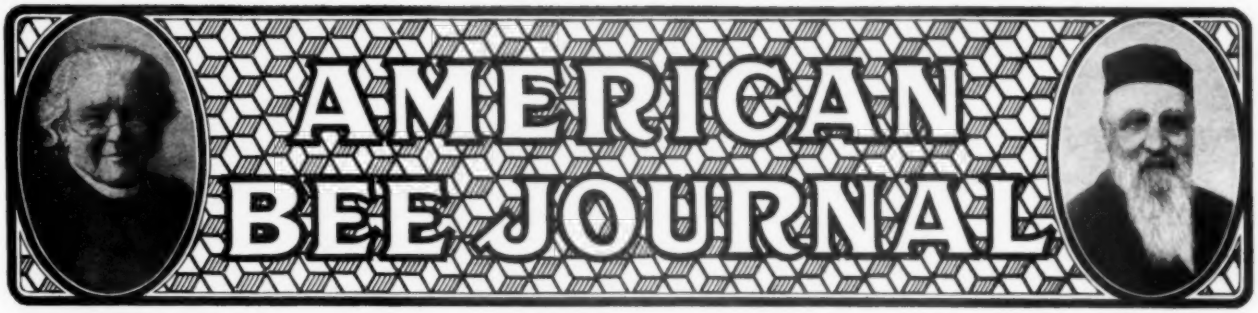

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Production Costs

By Penn G. Snyder,
Ohio.

SINCE the great depression there have been a number of articles published in the different journals on the cost of producing both comb and extracted honey. This is a subject which we are bound to hear more about, and if we do not learn our total and complete production costs, we, the majority of the bee specialists of the United States, will probably be forced to find some other employment. It is impossible to operate at a loss after one's cash reserves have gone into the red. The grim old wolf on the red side of the ledger sooner or later will have his way unless some means are found to drive him away. So if we are to continue in the business of producing honey we must receive sufficient returns from our product to cover the **total** producing costs plus a living wage.

As the beekeeper is a one crop form of suburban or rural work it can readily be seen he carries all his eggs in one basket. Unfortunately the depression has kicked his basket and the eggs have received a lot of breakage and so destroyed. It appears it will be necessary for him to produce an egg which cannot be broken.

For a year or more I have been assembling all the figures I could obtain from different beekeepers along this very vital subject of cost production. We, my partner and myself, like many other beekeepers have kept a sort of a set of books on our costs but it has been far from complete from a bookkeeper's standpoint. Almost all the articles printed lately on this subject come under the same category. It would be well for the beekeepers not to give their production costs for publication unless they are **in full**. They should be well itemized under their proper headings so a bookkeeper or the average beekeeper would be able to see at a glance where each and every cost came into the picture.

The following table is one from the Circular of Information No. 83, which was published lately by the state of Oregon. The Agricultural Experiment Station at Corvallis, Oregon, conducted a state wide investigation of the cost of producing both comb and extracted honey in that state. There were a total of 17,803 colonies in this investigation. They were owned by commercial beekeepers and the average number of colonies owned by each beekeeper was 191. This table will give a setup which the comb honey producer can use as a mark to shoot at in his individual figuring on his production costs.

A good average article of the incomplete information class was published in this journal August, 1934, page 353. This article written by Mr. Kruse, of Illinois, entitled "Comb Honey Production Costs" is well worth the reading but fails to fill in the whole picture. To quote Mr. Kruse—"The cost of producing section honey is 5¾ cents or $1.38 per case of 24 sections delivered." Then below we learn the labor cost is not included, also from the article I am led to believe there is no interest charge allowed on the capital invested. If we again take Mr. Kruse's figures at the depreciated rates of today the value of his 200 colonies of bees is $3,350.00. I believe this includes all needed equipment. At 5% this amount would earn an interest charge of $167.50 annually. This amount should be added to each year's expenses of production. If we also allow the average cost of labor per colony of the Oregon survey we have a charge of $3.20 per colony or for the 200 colonies $640.00, adding the interest charge of $167.50 we have a total of $807.50 to be added to each year's crop of honey. The labor costs would naturally vary with the number of sections produced each year. So the above is again only tentative, not positive. Mr. Kruse states for the first twelve years of his records he had a gross profit of $13.33 with expenses of $4.19¾ per colony. If we now deduct the pro rata cost of labor and interest which is $4.04 per colony to his other costs we have a net of $5.09¼ for his year's management and sales work instead of his figure of $9.13¼. This difference is rather a large item when we multiply it by his 200 colonies amounting to a total of $808.00 or $67.33 for each of the twelve months of the year.

Taking the years of 1932 and 1933 with his figure of $330.00 net for each year, if we now deduct the labor and interest costs of $4.04 per colony we find Mr. Kruse in the red to the extent of $478.00 for each year as manager. Naturally he has received part or all the labor charges, however, that really does not reduce the cost of his output. It simply means the man who did the labor was paid and the owner of the plant and manager received less than nothing for his year's work. If they are one and the same individual it still does not change the cost figures.

We may now see why Mr. Kruse asks "What will we do?" It is a question most of us are asking these days.

With these figures we approach something near the whole picture. It is one most of the beekeepers of the United States have been facing dimly for the past two or three years. Its outlines are becoming clearer and clearer as time goes on. We now can see we must reduce our production

TABLE No. 5. COST OF PRODUCING COMB HONEY, 1931 CROP.

Circular of Information No. 83.
Agricultural Experimental Station.
Corvallis, Oregon.

Cost Item	Average cost per colony	Average cost per case	Percentage of total cost
Labor:			
Hired and contract labor	$ .18	$ .09	2.9%
Operator and family labor	3.02	1.68	48.7
Total	3.20	1.77	51.6
Material and Supplies:			
Section boxes and foundation	.60	.36	9.7
Section shipping cases	.18	.10	2.9
Other material and supplies	.31	.14	5.0
Total	1.09	.60	17.6
Miscellaneous:			
Use of auto and truck	.47	.29	7.6
Bees and queens purchased	.36	.19	5.8
Other miscellaneous expense	.11	.05	1.8
Total	.94	.53	15.2
Total Depreciation	.57	.31	9.2
Total Operating Cost	5.80	3.21	93.6
Total Interest	.40	.22	6.4
Total Gross Cost	6.20	3.43	100.0
Credit for By-Products	1.50	.83	24.2
Total Net Cost	$4.70	$2.60	75.8%

It will be asked where do the by-products come into the picture.

This return is covered by rents for pollination, wax, chunk honey, sale of bees and queens and bee appreciation.

In all there were 1,455 colonies in this test producing comb honey.

costs; receive a higher price for our labor; or go out of business.

Such studies as these cause a man to see in black in white what his situation is. If he will carefully analyze the table of costs it is just possible he may be able to shave his hours of labor per colony to a lower figure, he would then be able to care for a larger number of colonies and with the same number of hours of labor secure a larger return on his labor. However, as I see it, this would only be a stop gap and will not be the final remedy.

I think all of us who have kept any figures and who have analyzed them have found a lot of fascination in arriving at the different costs of the separate operations as they come under their proper classification, and in assembling the different items under their proper headings. It is not all work.

Some answer must be found if we are to continue. Naturally there are some favored locations in the United States where large yields are the rule and honey can be produced at a profit even at the prices they have received the past few years. However these localities are the exception and they produce only a fraction of the honey produced in continental United States.

Our Cover Picture

The picture on the cover this month is furnished by Mrs. Benj. Nielsen, of Aurora, Nebraska. She writes as follows:

"While you are featuring beautiful scenes and locations in the various states I thought you would like a picture of the Nebraska state capitol building. This picture is a miniature of the original located at Lincoln.

This miniature is twelve feet high and has around nine hundred windows. The actual building was interesting in its manner of construction and cost $10,000,000. The erection of the building covered almost ten years. First, two sections of the base were built, finished and occupied on either side of former state executive quarters. Then the other two sections were finished to complete the square. Finally the old structure in the center was torn down and the tower erected. Thus at no time was Nebraska without a functioning capitol building.

The two-story base is in the form of a 437-foot hollow square, typifying the widespread, fertile Nebraska plains. The tower rising triumphantly 400 feet from the center expresses the ideals and aspirations of the citizens, reaching to the highest and noblest. Four passageways connect, cross-like, the tower and the four sides of the basal square, forming four inner courts which are gardened and strikingly beautiful with statuary. Murals and sculpture by famous artists further beautify the building."

So we recognize Nebraska—in the heart of the sweet clover country. Some of our finest beekeepers live in Nebraska. We are proud of one beekeeper, George Watt, of Kearney, formerly one of the managers of the Dadant apiaries at Hamilton, also a beekeeper of Illinois and deputy apiary inspector during the time he lived here.

As owner of the Platte Valley Apiaries of Kearney, he has made a record of production and distribution of honey in Kansas and Nebraska.

A Weight for the Flap

When paper cartons are used to ship honey, either in glass or tin containers, a weight is desirable to hold down the top flaps until the adhesive sets in sealing. I have found that a block of concrete with a horseshoe embedded for a handle is very satisfactory and convenient.

N. N. Dodge,
Washington.

The Disease Problem

SINCE publication of the article on "Progress with Bee Disease" by our Field Editor in the August issue, we have received numerous letters of comment. Nearly all these letters agreed that something must be done to find a better remedy than has so far been discovered for American foulbrood.

Some of these contained suggestions so useful and timely that we are reproducing the more important portions here. Disease is costing the American beekeeper enormous sums and all alike are seeking the solution of the problem. While there may be some disagreement as to the proper action to take, there is general agreement in the need for action which will ultimately remove the menace.

From a letter from Jay Smith, of Vincennes, Indiana, we quote as follows:

"To my mind we have tried our present methods long enough to know they are a failure. In spite of the millions of dollars' worth of bees and equipment that have been burned, American foulbrood is steadily and relentlessly creeping upon us.

"A few years ago we experimented with disinfecting combs with formaldehyde gas. Even though it were a complete success it is not enough. The colony still must be destroyed or shaken and if care be not used it will spread to other colonies. What we must have is a treatment which will permit the colony going right along while the disease is cleaned up.

"I have not the slightest doubt there is a simple remedy **if we only could strike it.** Can we breed an immune race? No doubt about it but it will take a long time and probably would not bring enough revenue to the one doing it to justify."

Smith also raises a question as to whether the subject of nutrition might not justify some study since some human diseases have been conquered in this way.

L. M. Gates, of the Nebraska Department of Agriculture, calls attention to the dangers of general experimentation by the beekeepers and is fearful of the consequences of this discussion. From his letter we extract the following:

"The theory that perhaps an immune strain of bees may be developed in the future, we believe is perfectly logical and even probable but it will take many years before this method could possibly make any great difference in the present situation. Also we believe that this method of approach should be classed with the treatment of combs and shaking of bees as a method to be used by the beekeeper in his own apiary and not as an inspectors' method. And as far as such treatments are concerned even though they are effective, they would not be used by the careless and indifferent beekeepers, who can only be reached by the inspection system. In other words the control or eradication of American foulbrood has in it a very large human factor which must not be overlooked in considering solutions for the problem."

It is very apparent that any such experiments should be carried on by trained men in isolated locations where there would be no danger to honey producers through accidental spread of contagion. It is also very clear that it should not be permitted to interfere with the inspection work until such time as a very definite and dependable result has been achieved.

Some very interesting comments come from Charles Mraz, Vermont Apiary Inspector, who expresses the opinion that in resistant bees will be found the only real cure of American foulbrood. Mr. Mraz has had wide experience with disease in his own and other yards and tells of some striking results.

By requeening with stock which has developed a degree of resistance, Mr. Mraz has already found encouragement. The results obtained have been sufficient to justify the hope of ultimate success if the matter can be followed up properly.

On this point we quote Mr. Mraz further:

"I always believed that some bees must be resistant. How else could they have survived through the ages before humans acquired the intelligence to bungle nature's law of the survival of the fittest?

"I believed that most of the bees in this country are not resistant because all are descendants of a comparatively few colonies. These descendants instead of increasing through the law of the survival of the fittest were increased much faster and were bred artificially for color, gentleness or honey gathering qualities.

"In Europe, where bees have existed for centuries, would be the best chance of obtaining resistant stock. It seems to me the best way to find out more about it would be to start importing queens again, especially queens from isolated places where they have not been subjected to artificial breeding. Among these, resistant strains of almost any race could be found."

Mr. Mraz has raised some questions worthy of very serious consideration. Considerating the enormous losses from disease, the industry cannot afford to drift along without effort to find the remedy. If the Bee Culture staff will take hold of this matter in the way suggested there can be little doubt of the final outcome. Under their supervision we may rest assured that the matter will be handled in a way to protect the industry and to offer no interference with the state programs of inspection.

Device for Cleaning Frames

By Leroy Churchman,
Kansas.

We used to do all of our honey selling in the fall and spend the winter setting up supplies and getting things in shape for the next season's requirements but now we have built up a trade that demands selling through the entire year and we have to do our other work during any spare time we find, so we use every time and labor saving device we can.

We try to figure out plans to fit our own needs and some of these may be of use to others. We are always glad to pass them on.

We produce considerable bulk comb honey for packing in jars and each winter we have thousands of shallow frames to scrape and clean before putting foundation in them. This used to be a long and tiresome job but we have now found a device that does the work fast and well.

We fasten a corn knife solidly above our work bench and let it extend out over the bench about 16 inches. It is about 24 inches above the bench. We place a box under it to catch the comb and wax and then we are ready for the work.

The frames are pulled back and forth over the blade in saw fashion and are cleaned in a jiffy. You can also scrape supers, section holders and hive bodies over this in one-fourth the time it takes to clean them with other scrapers.

Economic Plants

A new book of interest to plant students is "Economic Plants" by E. L. Stanford, published by the D. Appleton-Century Company, of New York. It is published on calendared paper, contains 571 pages and 376 illustrations. The price is $5.

The book is a rather complete text covering the various fields in which men have learned to utilize plants. There is a large section devoted to forest products for wood, lumber, tanning materials, cork, their uses and distribution. Textile plants such as cotton, flax, and hemp, are likewise treated at length. Food products, cereals, fruits, spices and medicinal plants occupy much space. There is a vast amount of information not easily available on drugs and medicinal plants, vegetable oils and sugars.

Whether one wishes to know about vanilla or rubber, tea or peanuts, the information is here in a convenient and usable form. Doctor Stanford has done a good job in writing a book which will be very useful to many students of plant life.

Rising Prices

Reports from numerous market centers indicate higher prices for honey. A careful reading of our crop and market page will show clearly the reason why. Except for a few localities, the crop is below normal outside the sweet clover belt. Not only is there a shortage of honey but at the same time we find a similar shortage in the fruit crop. Higher prices come as a very natural result of such a condition.

We hope that the crop is not small enough to bring about too high prices for honey at this time. The experience of numerous products has demonstrated that high prices turn the buyers' attention to the search for a substitute. Honey has long been in serious competition with cheaper sweets which are readily available in any desired quantity. If our present demand can be supplied at reasonable prices, prosperity lies ahead for the honey producer. If we lose the many new customers which have been acquired in the past two or three years it may be difficult to win them back again.

A good crop at a modest price is better for everybody than a light crop at a high price. However, the weather is beyond the control of the beekeeper and if the plants fail to yield nectar, there is nothing that we can do about it. Those who do have honey to sell this year will profit.

It is important that those who have an established trade make sure that they hold sufficient reserves to carry through to the next crop and thus insure regular distribution. The new customers for honey which have come from the work of the American Honey Institute are responsible in part for the greatly increased demand.

When Nectar Flows

It is interesting to note the conditions under which the big honeyflows occur. The late E. W. Alexander who became famous for his big crops of buckwheat honey stated that the best yields came with cool nights followed by a clear sky and hot sun with little or no wind. This agrees with the accepted idea that white clover yields best when the weather is hot with plenty of moisture in the soil.

The factor of cool nights followed by hot days appears to be important with many plants. It is commonly stated that one reason for the big yields of sweet clover in the Plains Region is the difference between day and night temperatures.

Rayment has written, (Money in Bees), that "for a real bumper crop of honey from the Eucalyptus a showery 'muggy' season is best. It is particularly noticeable just before a thunder storm, the trees fairly drip nectar, but once the wind veers to a cold quarter the honeyflow is ended."

Many plants are temperamental in their yield and only give forth profusely in an occasional season. Basswood is especially well known for this reason. Too often there will be plenty of bloom but the season will pass with but little honey in the supers. When all conditions are right, generous crops are gathered. Palmetto is likewise uncertain and weather conditions too often spoil the prospects of the expectant beekeeper.

The Locust Tree

Inquiries continue to come to this office about the locust tree. As mentioned in these columns before there is much confusion in the names of the different species. The one which yields honey freely and is important to the beekeeper is the black locust, **(Robinia pseudoaccacia)**. The one commonly called "Honey Locust" is an entirely different kind of tree, very thorny and of little value to the bees.

The beekeeper is therefore interested in the black locust which is just now quite widely planted by the men employed by the government in various efforts to relieve unemployment. For many years it has been extensively grown for fence posts and for farm wood lots in the Middle West.

The tree is a rather rapid grower and is quite ornamental in suitable situations. It blooms early and often gives a good honeyflow of rather short duration. The honey is light in color and generally regarded as of high quality.

At blooming time the tree is filled with clusters of white pea-shaped blossoms which are quite fragrant. The beekeeper may well encourage the planting of this tree, either as a roadside tree, an ornamental or for wood lots.

The black locust, also called yellow locust and false accacia, is common from Pennsylvania to Oklahoma but apparently will succeed over a very wide area. It grows well in the northern plains where temperatures drop to forty below zero and where there are extreme periods of drouth.

Our Varied Industry

It is difficult to appreciate the vast extent of the beekeeping industry in this country. In late July bees were working on many different plants in widely separated sections. There were references to bees working on mustard and peppers in the orange belt of California; at the same time they were gathering honey from sumac and buckwheat in other neighborhoods. In the Imperial Valley they were harvesting honey from alfalfa as they were in the northern valleys and in the Mountain States. Over a vast area of the Plains Region and the interior valleys of the Missouri and upper Mississippi valleys sweet clover was the plant which yielded the greater part of the available nectar. It is from this region that most of this year's honey comes. Bees were gathering from Mexican clover in Georgia, and fireweed in the North.

Alfalfa was reported as yielding honey over much of the eastern portion of the country this year. There are many reports of good flows from basswood. From West Virginia and the Carolinas come reports of honey from sourwood and bay. Cotton is the source of dependence for thousands of bee men in the South.

So many different sources yielding in different places at the same time guarantee that somebody will always get a crop no matter how unfavorable the season.

Color of Honey

In his book, "Money in Bees," Tarlton Rayment, the Australian, states that the color of honey and pollen is largely influenced by the soil. This raises a very interesting speculation. There are indications that soil is an important factor in the color of honey but there are other factors as well. It often happens that there will be a marked variation in the color of honey gathered from the same plants in the same apiary from time to time.

Beekeepers now and then call attention to the fact that the honey gathered in the early part of the flow varies several shades in color from that gathered toward the end of the flow.

The great variation in color of honey from the same plant from different localities has long been recognized. This has been especially commented in the case of alfalfa which is light in color in the Inter-Mountain region and dark in the Imperial Valley of California. Altitude has been the most commonly accepted explanation for this variation.

The change that takes place in the same apiary from time to time indicates that temperature and moisture may play an important part. However, a very superficial study of the subject will raise so many questions that one hesitates to make any attempt to account for such changes. Honey gathered from clover will be light in color while honey gathered a few weeks later from buckwheat by the same bees in the same locality will be very dark. In this case the clover honey will tend to light and the buckwheat honey will always be dark no matter what kind of soil they grow on even though they may vary somewhat.

It is probable that many different factors have some influence on the color of honey and that no one is sufficient to account for them all.

The Bee Disease Question

Since the publication of the article by our field editor in the August issue, we have had some letters of condemnation and also letters of approval.

It is apparent, however, that some of our readers misunderstood the position of this magazine. We are not opposed to the present inspection program. There is no intention to argue which may be the best method of treatment.

Our whole argument is based on the idea that present methods will never solve the disease problem. In the editorial above mentioned it was specifically stated that the effort to find a new solution should not interfere with present inspection efforts. Our field editor does not for a moment argue that inspection should stop. He only proposes that scientifically trained men should be set to work in search of a remedy for American foulbrood which will eliminate present losses.

This magazine has consistently supported the inspectors and proposes to continue to do so. We recognize the fact, however, that in spite of their best efforts disease continues and that there is need of further research in the hope that a remedy will be found.

When the house is on fire we need the assistance of the fire department, even though we propose to erect new buildings of fire proof materials. We can hardly dispense with the services of the inspectors while we are seeking disease resistant bees.

The Drouth

We are passing through the worst drouth in the history of our country. The extent of its far reaching effects cannot yet be measured. Many beekeepers have not only lost this year's crop but find themselves confronted with the prospect of another failure next year through the destruction of the honey plants. There are large areas where the bees have already died of starvation at the time when they should have been gathering a good harvest.

It is unfortunate to the industry that a short crop should come just when the demand for honey is the best in many years. Many new outlets for honey have recently developed and if this demand cannot be supplied at a reasonable price, substitutes will take the market.

Individual beekeepers who have lost their bees are in much better position than in the old days before the development of the package business made it possible to secure a dependable supply of live bees when needed. If equipment is well cared for the hives can be quickly stocked with bees when the bee pasture is again available. It is especially important to guard against the loss of combs by the waxmoth. With plenty of drawn combs losses can be replaced quickly by the purchase of package bees.

Reports indicate that drouth extends to twenty-four of our states and to many foreign countries. The wheat crop is reported short in Australia and the Argentine, the rye crop in Germany and the rice crop in China because of drouth. Anxiety is already manifested as to the future food supply, should general rains fail to come soon.

The Valdosta Meeting

Much interest is manifested in the general meeting of beekeepers to be held at Valdosta, Georgia, in December. For the first time all three organizations, the Southern Conference, the American Honey Institute and the Honey Producers' League will hold a joint meeting. The indications are for a record breaking attendance.

Breeding for Disease Resistance

Asters were once among the most popular garden flowers. Then came the wilt disease and many gardeners discarded them because it appeared impossible to overcome the disease. Things went from bad to worse until it seemed that the asters would disappear from American gardens. For no apparent reason the plants would wilt down and die just when they should be offering an abundance of bloom.

Once the spores of this disease are brought into a garden the disorder persists, the land becomes "sick" and whenever an ordinary strain of asters are planted they die. The disease remains even though asters are not planted again for several years.

Then came the patient plant breeders seeking to develop strains of the plants which would resist the disease. It is a long story of several years of patient effort to find plants which showed resistance and to breed them until real resistance was established. At last it has been accomplished and asters can again be grown, even in gardens which were "aster sick."

Similar work has been done in overcoming diseases of such garden crops as tomatoes and cabbage with like success.

After fifty years of effort to rid ourselves of American foulbrood it is time to get in line with modern progress and set trained men at work to combat this disease. With the proper expenditure of a moderate sum it can be done. Why wait longer to begin?

In the meantime we should lend every encouragement to our inspectors who are making heroic efforts to overcome it.

Cooperation

We are inclined at times to be frightened by the prospect of increased influence of government in business. Perhaps it is well to use great caution concerning the extension of government control, yet we only have to review the past to see that good is possible also.

In the early days of this country roads and bridges were privately owned and toll gates were erected every few miles. The average charge for a wagon was 12½ cents at each of these gates. To cover the distance that the driver of an automobile goes in a day now would cost a substantial sum. Cooperative effort by which roads and bridges are paid for by all and used freely by all has been greatly to the common advantage.

Public schools are of comparatively recent development and it was only the children of the rich who could afford the luxury of private tutors. Here again we find a cooperative effort resulting in the general good.

The average farm where a deep well is necessary must spend a thousand dollars or more to insure an abundant and convenient water supply such as the resident of every town enjoys. The interest on the investment alone amounts to about five dollars per month to say nothing of operating costs, repairs, etc. The town dweller, where the cooperative water supply meets his needs, gets his service at a fraction of the farmer's cost.

In the early days it cost 25 cents to send a letter a distance of 500 miles! Now we can send it anywhere in the United States for three cents and we are inclined to complain that the price has been raised from two cents.

It is probable that the cost of service can be likewise reduced for many other items in our daily budget by cooperative effort.

Those Michigan Meetings

By M. G. Dadant.

THE series of Michigan meetings in memory of the late Geo. S. Demuth are over, and such meetings they were. Unfortunate it is that Mr. Demuth might not have had such a well deserved tribute paid to him while he was still with us to enjoy it. There were large gatherings of up-to-the-minute beekeepers, memorial programs emphasizing the great work of the teacher Demuth, and his friendly practical study of bee behavior and apiary handling.

The writer was fortunate enough to take in the whole tour in company with Mr. A. G. Woodman who knows Michigan like a book and likewise knows its beekeepers.

It would be impossible in so short a space as is allotted me to cover the meeting fully, yet a chronological description might be interesting. From the drive into Michigan and a visit to Woodman's delightful little cottage high on the dunes at Grand Haven, till he finally put me aboard train at the end of the trip at Grand Rapids, every minute was occupied.

Our first meeting was at Ypsilanti in the delightful yard and home surroundings of Floyd Markham with the bees humming merrily in the back yard and a group of some 150 beekeepers in a tent in the front yard hearing a program. The weather has been pretty dry in Ypsilanti and the folks down there will not have quite the crop that they had anticipated. However, sweet clover here as in practically all other places visited, has proven a boon to beekeepers and is prolonging the flow.

A delightful evening banquet was held in the city itself. There seemed to be a spirit of rivalry at the banquet table as to who could tell the biggest lies including those of deer hunting and fishing. The writer tried to keep up but had very much difficulty in equaling some of the stories told by some of those native Michigan fellows who had each other to swear to the authenticity.

Charles A. Reese, of Ohio, and Cliff Muth, of Cincinnati, also are deer hunters.

The next morning a visit to the Reinhold Bee Farms at Flat Rock was very much enjoyed. Mr. Reinhold is of German descent, having come over since the war and has built up his colonies to nearly 800.

When asked what his difficulties were with American foulbrood, Mr. Reinhold expressed himself — "Oh, there are always weeds in the garden; to make the best garden you have to get out the weeds. That is the way we do with American foulbrood."

A quick trip took us to the W. K. Kellogg plant at Battle Creek, Michigan, where the next day's meeting was to be held. We were royally entertained there, some group of 250 beekeepers, who were taken through the entire plant and then banqueted for lunch at noon. We had the honor of having Mr. Kellogg with us as well as his grandson and, of course, Miss Barber who has been such a wonderful help to the beekeepers for many years. After a program in the afternoon, the gathering went to the brand new honey house of Ralph Blackman at Portland for an investigation of his newly installed equipment. A very fine layout all around.

We were banqueted in the evening at the nearby country club and enjoyed an evening of lectures and entertainment.

Our third day's trip included a visit to the apiary and new honey house of Jay Cowing at Jemison, just outside of Grand Rapids. Cowing has, during the past few years, worked his bees "north and south" in Michigan. He has a record of having moved a total of thirty-one carloads of bees into northern Michigan, and back again, during his beekeeping career. Now he moves by trucks.

This was followed by afternoon and evening programs at the Grand Rapids "Pantlind" hotel, as well as a visit to the Woodman Bee Supply factory.

Throughout all of this southern section of Michigan, we had found spotted conditions with a tendency toward drought and a slight curtailment of the crop over what it would have ordinarily been.

Our next day's trip, however, took us into an entirely different territory, that around Traverse City in the northern end of the southern peninsula.

The meeting was at the home of James Hilbert at Traverse City. Hilbert, as you know, is renowned for his "Honey Hunks" and "Honey Chunks." He produces nothing else and has been buying in quantities from other beekeepers who are now starting to produce the chunk comb honey. Hilbert is undoubtedly a salesman as he is unable to get enough of this material even though he sells all of his own and that of all of his followers in the chunk line.

Here the bees were working heavily on sweet clover. A visit to the Hilbert home yard showed the supers stacked five and six high with the bees rolling in just like a white clover flow.

Mr. Hilbert gave a demonstration of his method of cutting and packing the honey hunks by which this comb honey is "never touched by human hands." The evening program was enjoyed on the edge of Traverse Bay. No more delightful spot for such a meeting could have been selected and the banquet which followed was equally enjoyable and bountiful.

The evening program was in the high school building.

We had the pleasure of being entertained there for that night by Mr. and Mrs. Frank Slusher whom the writer had known for many years through correspondence. They live in delightful surroundings with a long distance beautiful view.

The following day, or Sunday, at the conclusion of the meeting, an opportunity was presented to visit for a part of the day with Mr. and Mrs. Ira D. Bartlett and to enjoy noon day lunch with them.

Mr. Bartlett, our readers will recall, is the big beekeeper who has practiced for several years the killing of all of his bees in the fall and purchasing of new packages in the spring. We hope to give more of his plans in a future issue. It is needless to say his whole set-up, his apiaries and his system of management were worth learning.

Our last stop before returning to Grand Rapids was a visit with the Hubbard Brothers at Boyne Falls.

Mr. Woodman thought he knew just exactly where these good folks lived but was unable to locate the house until a small youngster pointed it out.

Woodman's comment was, "well I might have known, you can always depend on the beekeepers living in the nicest, best kept houses in the town," and he and the writer went back over some of the beekeepers we had visited during the past several days and this fact was brought particularly to his mind. Beekeeping is becoming a specialty in many instances and beekeepers are getting a desirable livelihood from it. Perhaps also the bees themselves with their thrift give to the beekeeper the same idea and he puts it in practice in his homes and his surroundings.

All in all, the meetings and the trip were very delightful. We had

excellent weather, particularly when I returned home and found that 100 degree temperatures had been the rule during my absence.

Nothing has been said about the various talks given during the four days' session. It would take too much space to give anything even approaching an outline of the material given.

Secretary Kelty, or "Ike" as he is familiarly called, is a dynamic force in Michigan beekeeping. He was everywhere. His enthusiasm is contagious. No doubt his plan of four regional organizations to support the state association is going to set the example for other states to follow.

Naturally, enthusiasm for the American Honey Institute was everywhere prevalent. The Valdosta joint meeting of Institute, League and Southern Conference promise to be attended by a number of Michigan beekeepers.

News of American Honey Institute

National Honey Week

THAT National Honey Week is of great importance is borne out by a summary of the 1933 Activity Report. More than two and a half million pieces of honey copy were distributed as a result of last year's Honey Week program. This should be an incentive to beekeepers to lend their support everywhere to this important event. Remember the purpose of the week is to acquaint the public with the merits of honey. You will find it a pleasure and a profit to participate.

The American Honey Institute, Madison, Wisconsin, has for your use a National Honey Week program. Send for your copy. It gives suggestions for bee and honey talks, honey stories for newspapers, honey demonstrations, newspaper publicity, literature for distribution. Write to the Institute for a copy.

This year the usual national broadcast will probably be arranged and local broadcasts will help. The Institute has prepared honey broadcasts which can be given to local stations and in many cases you will find them glad to use all or part of the material. These are listed in the National Honey Week folder just mentioned.

At this writing it is certain that the Kellogg Company will again have a National Honey Week poster available for beekeepers to use and special recipe leaflets. Write direct to the Kellogg Company, Battle Creek, Michigan, for this material.

A special card is to be printed and available to Institute members at 20c per 100, giving tested recipe offer for mailing direct to the Institute.

American Home Economics Association Convention

More than nine hundred teachers, nutritional specialists and home economics extension workers registered at the Kellogg booth with a representative of American Honey Institute for honey food value charts, using honey leaflets and honey recipe material.

National Retail Grocers Exposition

Approximately two hundred grocers registered at the Straub honey booth for Institute material. Many of them indicated a desire to cooperate in National Honey Week.

Honey Recipe in Cottage Cheese Hanger

A hanger for milk bottles is now available, giving recipes for honey cheese torte, cottage cheese salad dressing, cottage cheese and orange marmalade sandwiches. These are printed hangers for the use of dairy men with their name and address imprinted. 75,000 of them have been sold to dairies for use on cottage cheese glasses by the printing company who designed them. American Honey Institute happened to work with the printing company representative and sell him the idea of the goodness and appetite appeal of the honey cheese torte. These hangers will be sold to dairies about the country. Beekeepers might interest local dairies in using them. Send for a sample.

Magazine Cooperation

The following tems have appeared in recent magazines: Bakers Helper, June 16, "Replacing Sugar With Honey," "National Honey Week," July 28, "Honey Can Be Used in Practically All Baked Goods," "Honey Institute Will Cooperate With Bakers," "A Honey Booth."

Jiffy Wit, "Pecan and Honey Caramel Rolls" and "Honey Glace" August issue. Liberty, June 25, Section of Princess Kropotkin—describes pork chops made with honey by Mr. Caan Toon, "who makes Chinese magic in the Hollywood kitchen of Director and Mrs. Richard Boleslavsky." Good Housekeeping, July, "Honey Jelly Formula" page 86. Parents, July, honey included in the family meals. Delineator, July, page 63, "Wheat Delights Use Honey."

New Leaflet

The Institute has available a new leaflet on canning and preserving recipes.

An Idea for the Removal of Extracted Honey

Here is an idea for the removal of extracted honey supers which will save lifting and avoid disturbing the bees. Place an extra bottom board on the ground near the hive, then place a bee escape board on this bottom and set the supers of honey on the escape. Cover with a regular cover. The bees will escape from the honey and go back to their hive. Next day the honey can be carried into the extracting house without disturbing the bees. This is especially recommended where supers are piled high on the hives and there is much lifting.

Orville Rogers,
Iowa.

[Be careful that the stacks of supers are not open to robbers anywhere or you may lose the honey.—Editor.]

Breeding from the Best

In all this discussion of queen rearing, "breeding from the best," etc., I have come to the conclusion that the importance of the drone is as great as that of the queen. I have had queens that, judged by every standard, were poor, yet daughters of these queens have headed some of the best colonies in the yards. I recall particularly a vicious colony which bulit up slowly in the spring and produced no surplus. When that queen was superseded, her daughter headed the best colony in the yard—gentle and wonderful workers. When controlled mating becomes active, we'll know more about this. If "The bull is 50% of the dairy herd," as dairymen say, why isn't the drone 50% influential in transmitting proper qualities to the colony?

S. F. Haxton,
Pennsylvani.

Lye Disinfectant

Lye is excellent for disinfecting wood and metal parts of beehive equipment from diseased colonies. There is no exact proportion of lye. The lye aids in cleaning off the wax and propolis; it even takes off the paint. We usually put in two cans to a hundred gallon tank of boiling or hot water. That would be about one can to a fifty gallon tank. Put the equipment in the boiling water for a few minutes, then clean up and repaint. Everything is safe to use again. Lye water gets into every crack and crevice. It does a swell job.

One corner of the Western Washington Fair Grounds, showing the building that houses the bee and honey exhibit.

Honey At The Fair

By Natt Noyes Dodge,
Washington.

Mr. Dodge has been a honey judge in the West. He gives an excellent summary of the worthwhile points to be considered both in judging and in display. It is the first real study of this subject that has come to our attention.

"IF you wish to make good grades," one of my professors once told me, "study your teacher with as much care as you study your books." I believe this sound pedagogical advice may be applied effectively to competitive honey display; **study your judge with as much care as you prepare your exhibit.**

In any competition not measured entirely by mechanical devices, the human element must enter in the form of a judge. He is selected because of experience and because of assurance of his ability and fair-mindedness. Naturally, the man with wide experience in honey production, packing or marketing will have certain definite opinions. The judge who is a comb honey producer admires a display of uniformly excellent sections. The marketing specialist knows the style of glass container which his experience shows to be practical in the store or home. In close competition, his placings will be governed by these details which the exhibitor may fail to consider. Frequently the professor of apiculture of a college is selected to judge the exhibits in which case show standards may be the basis upon which judgment is founded. The wise exhibitor, therefore, knows his judge and prepares his exhibit by the standards that particular judge may be expected to use in making his decisions.

Although my experience in judging honey has been limited to four times, twice at the Oregon State Fair at Salem and twice at the Western Washington Fair at Puyallup, certain points have come to my attention that may be of interest when brought to the notice of exhibitors and colored by the judge's viewpoint.

Probably no two fairs in the country are operated by the same set of rules. In some cases the judge is provided with a score card allowing a certain number of points for each characteristic of the honey in each class. For example, at the Western Washington Fair, extracted honey in glass is given 35 points for color, 20 for body, 25 for flavor, 10 for package and 10 for style, making a total of 100. The judge may compare samples for the exhibit of each competitor according to the various qualities and grade them on a comparative merit basis. The final placing is then determined by obtaining the total of points allotted the entry. In this way the judge does not know which entry places first until the totals are obtained. Here is an example taken from the score card of the Western Washington Fair of 1931:

Class 504 Light Amber Extracted

Exhibitors' Numbers		3	17	121	148	401
Color	(35 points)	25	33	25	32	20
Body	(20 points)	15	17	15	16	15
Flavor	(25 points)	20	23	18	22	15
Package	(10 points)	8	8	6	8	9
Style	(10 points)	8	7	9	8	9
Total	(100 points)	76	88	73	86	68

So in this class exhibitor No. 17 placed first with a total of 88 points, No. 148 second, No. 3 third, No. 121 fourth and No. 401 fifth. The judge may not agree that the item of color deserves a rating of 35 as compared with 25 points for flavor but he must follow the score card.

Where the score card system is not used, the judge compares samples of each of the exhibits. He considers color, flavor, body and other points and gives first place to the one which he feels is the best. He may feel that flavor is the most important characteristic of honey while the exhibitor may have thought color as supreme and exercised little care in selecting for flavor.

It is less work and requires less time for a judge to make his placings without a score card but renders a more careful decision and stands less chance of incurring the wrath of exhibitors if he has a score card to guide him and to enable the competitors to study his decisions.

The matter of color in judging extracted honey is a difficult problem for the judge and the exhibitors. Following the Western Washington Fair of 1931, after the prizes had been awarded and all the data of judging been made public, exhibitor No. 3 came to me and asked why I had placed him so low on color in the light amber class. He explained he had given especial attention to color, had blended the honey for that class in order to obtain proper color and had used the Pfund grader as a guide. His honey was the darkest of the class and one sample, that of exhibitor No. 401 was exceptionally light. Had I used the Pfund grader in judging No. 3 would have had the only honey in the entire class to qualify as light amber. The rest with a graded white and would have been eliminated from color competition.

Technically, therefore, exhibitor No. 3 was right, and deserved the highest rating on color. But would it have been fair to throw out all of the other competitors because they did not have access to a Pfund grader? The rules did not stipulate the Pfund grader or any other standard as a basis of color grade. The matter was left to the judge.

Bees and queens perhaps offer the most difficult problem. Not only must he find the queen in a well populated observation hive with probably poor light and cool weather, but he must keep in mind a clear picture of her and her work to compare with mental images of other competing queens. If it were possible to arrange the queens side by side, judging would not be so difficult. However, with a queen bee, physical perfection is often no indication of ability and any judge infallibly capable of telling from the appearance of the queen, the honey gathering characteristics of her

Let the whole county association exhibit together. Here is one in San Diego County, Calif.

daughters, must have superhuman powers. Show standards are about the only ones on which a judge is able to base a decision.

I have always judged the pastries, canned fruits, jellies, candies and the like with considerable fear and trembling. Her cooking is, of course, a woman's pride and you all know the old saying about a woman scorned. It is impossible to give them all first class. Culinary creations seem to me to be out of a honey judge's realm and in the sphere of the home economics expert. However, they are usually made a part of the honey judge's duties. It is a pleasant task if one is able to let nothing more than his conscience and his appreciation of good food be his guide.

And now for a few suggestions to exhibitors! Remember in close competition, a simple detail may mean the difference between a blue ribbon and a red one, or no ribbon. I once lowered an entry to third place because it contained a thread from the cloth through which the honey had been strained. In another case, the dusty cap on the jar was the only point of choice between two entries. On another occasion, an exhibitor displayed section comb honey in printed cellophane wrappers while the other entries were unwrapped. This little extra detail might have given him first place had I not removed several of the wrappers and found that the wood on the sections had not been cleaned and scraped. Cellophane may cover a multitude of sins, but the judge is certain to find them.

Once when judging was going slowly, I determined to speed things up by comparing the body of several entries of extracted honey by inverting the jars and comparing the rate at which the bubbles rose. In one jar the bubble was larger and rose faster. Naturally I concluded this honey was lighter in body, but more careful examination showed it to be the heaviest of the lot. **The moral is to be sure to fill the jars to the brim so the bubble will be small.**

It has seemed to me that the major goal of honey display is to impress the public favorably with honey and to educate the public to the health, food and flavor merits of the product. I am inclined to judge any exhibitor's display from the standpoint of its attractiveness and educational value. At Mr. Ross' suggestion, at the Western Washington Fair, plans are on foot to let the public select a most attractive honey display at that fair.

Sometimes exhibitors include items like solar wax melters, extractors and others pieces of equipment. Although these things may have certain educational merit, they are not appetizing and to my way of thinking are not appropriate in a food display. Everything should be spic and span, neat and appealing. The combs in the observation hives should be selected carefully and arrangements should be made to remove dead bees daily. You see I have been affiliated with the packing and marketing of honey and re-act accordingly. That is why I say, know your judge and prepare accordingly.

The preparation and arrangement of a honey display is no simple task. It requires hard work and artistic talent. Frequently the following of a definite motif makes the program easier and the effect more striking. The entire display should have the appearance of unity, not merely combs and jars of honey placed here and there. The jars should be of one or two uniform styles, not tall, squat, octagon, round and fluted indiscriminately mixed.

The containers should be massed to give the appearance of abundance, yet enough space should be left between groups to prevent crowding. Various colors are kept together. This arrangement makes the unity and neatness, but impresses the public with the fact that there are several shades of honey. Many people still think that honey is just honey. If flowers or plants are included, they should be changed daily or pressed and mounted for the occasion. Bees-

(Please turn to page 420)

Colorado Honey Producers' Association did not miss a chance this time. A Bear Brand exhibit.

A Malihini Views Hawaiian Beekeeping

By Heber E. Coffey,
Texas.

BEING a native Texan and having been on the island of Oahu only since May 25, 1933, I am in the language of the aboriginal inhabitants of these islands a **malihini** (new comer, stranger). Only by residing here many years and making the islands my permanent home may I become a **Kamaaina.** Nowhere else in the world will one find the English language used in the manner it is used here. Conversations between Orientals and **haoles** (whites) are liberally interspersed with Hawaiian words and it is interesting to observe that the Japanese, who make up more than fifty per cent of the entire population always use Hawaiian words, such as they know, in attempting to make themselves understood to the haole rather than words of their fatherland. One soon comes to understand the dialect commonly used which is termed "pigeon" English.

Since my arrival I have been actively at work with and in charge of the largest string of apiaries on Oahu —in all consisting of some 2000 colonies and during this time I have observed closely. I believe the picture I shall give is correct.

This is a land of perpetual springtime, made so by the vast stretches of the Pacific surrounding it on all sides; but it has its seasons. The volcanic mountain sides and vales and valleys are at the height of their lovliness when Nature arrays them in a riot of many colored and fragrant blossoms during the spring months. It may be a surprise to most readers to be informed that there is but one blossom, one plant, or tree that interests the commercial beekeepers of the islands. This is the algaroba (kiawe) tree. This year they tell me it began to bloom in April and it may begin its bloom earlier or later than that month and the honeyflow may be long or short. I observed that the trees were in bloom when I arrived (May 25) and the bees were storing a mild white honey and all through the intervening months to approximately October 10 (1933), this flow continued. At no time was it heavy, but always light, steady—sufficient at any time for bees hived on starters or foundation to draw out combs.

They tell me that many years ago the islands were in many places practically deserts and that there came here a Roman Catholic priest who brought with him seeds of the algaroba tree which he planted. This introduced tree found here an environment to its liking and thrives here better than in its native Italy and Algeria. The photograph will give you an idea of the appearance of the tree. In many respects it resembles the mesquite of Texas and the Southwest. It has the beans, the cat-tail blossoms and the ever remindful thorns. But for the sugar cane plantations this island on the west would be a vast forest of algaroba trees. Too the charcoal and wood men fell many of the trees each year. The charcoal from this source makes an extremely hot fire, almost equal to coal, and it was the fuel of the early Japanese residents. Beyond question commercial honey production would not be possible in these islands but for the algaroba tree and from its blossom comes all the white and water white honey produced here. The small percentage of dark honey produced is not in great demand and not of much commercial importance.

On my arrival here I had ideas of how beekeeping should be carried on. My ideas have undergone modification. For greatest economy and most success beekeeping cannot be carried on here as in the states. Always the nights here are cool enough for a blanket to be comfortable before day. It may be this climatic condition as well as the nature of the nectral sugar of the algaroba that causes honey to granulate here very quickly. Unlike most mainland honey, algaroba honey granulates a solid mass from top to bottom of the 60 pound tins. Left in the combs longer than two or three weeks after being stored the honey becomes a solid mass. Thus the necessity for extracting continuously all during the honeyflow and extracting half filled frames and supers. With best attention that a crew can give, however, there will be combs of granulated honey and the only remedy I know is to melt them up. Under such conditions I do not see that it would be practical to use expensive wired foundation or wire frames. One does not need more than two supers above the brood chamber at

Mrs. Olivia St. John Gilbert, left, Manager of Sandwich Islands Honey Co., Ltd. Sugar cane field in the foreground. Mountains in the distance.

Algaroba tree at Gilbert Station, Eva Plantation, Oahu.

any one time in a year such as this I have experienced since the frequency with which extractings must be made does not give the colonies time to fill more than this number.

The islands are all of volcanic origin and bees find lodging places in rock cavities. The Japanese call these mountain bees, and there are many of them. In this mild climate these bees will make disease eradication extremely difficult if it is ever attempted and it is indeed unfortunate that disease was ever permitted to gain a foothold here. Without this one limiting factor one can well imagine that this territory might be a beekeeping paradise that would make the world take notice.

According to information distributed by the local (Honolulu) chamber of commerce the first hives of bees introduced into Hawaii came from California in 1857 (by whom is not stated). Prior to that date several unsuccessful attempts had been made to introduce bees by bringing them from New England around Cape Horn. The first Italian bees brought here are said to have been imported from California in 1880 by Samuel G. Wilder (now deceased). The birth of commercial beekeeping in the islands dates back some thirty years to the Sunday when Lee and Oswald St. John Gilbert (brothers) hived a swarm of bees in a wood box and were stimulated by this event to import ten colonies of bees from California. Later they organized the Sandwich Islands Honey Company with capital stock of $60,000.00 and at the height of their success operated 10,000 colonies of bees on the five major islands of the Hawaiian group. Lee St. John Gilbert took active part in apiary work and trained Chinese and Japanese help to care for this vast number of colonies. Stricken with cancer from too much exposure to tropical sun he died some years ago and the apiaries on all the islands except Oahu were abandoned by Oswald who was not of robust health. In 1930 the Beekeepers Item carried an account of the death of Oswald St. John Gilbert who had at the time reached the half century mark. Manifesting more than usual courage Mrs. St. John Gilbert has continued to conduct the bee business left her and with optimism through these depression days.

The other principal producers of honey and wax in the islands are the American Sugar Company operating 2700 colonies on their vast ranch on Molokai, the Puako Ranch operating 1100 colonies on Hawaii, and the Kauai Honey Company operating 925 colonies on Kauai and 1245 colonies on Maui.

It would be difficult for a stranger to come here and engage in commercial beekeeping without buying someone out. Most of the land is owned by powerful corporations and these have to be dealt with. The sugar plantations own or control by lease much of the best land in the islands. But for the fact that the algaroba is a very valuable source of food for cattle and other live stock as the loads of beans the trees bear are very nourishing food most of the trees would be cut down. But dairying and producing meat is a profitable business and the stock men demand the trees for pasturage.

I have been advised that there are no honey crop failures and that the algaroba produces well each season. However in the report of Max G. Linder, representing the Los Angeles Chamber of Commerce of 1928, I find this statement: "There has been only one year during the past twenty-five years of beekeeping that an irregular crop occurred. and that was during 1927. Just what happened is not known, but the crop was about one-third normal."

Of my friends and readers on the mainland may I inquire, pehea oukou?

Honolulu, T. H. Nov. 21, 1933.

Roofs or Fields— the Bees Don't Care

John P. Tull keeps several colonies of bees on the roof of his house near Fairmount Park in Philadelphia. He has excellent crops every year, has met and conquered AFB (as Philadelphia beekeepers by common consent call Bacillus larvae or American Foulbrood) and is a thorough beekeeper with many years of experience.

S. F. Haxton,
Pennsylvania.

In One Magazine

Health Culture, a magazine sponsoring the securing and maintaining of good health is giving honey some splendid and impressive advertising. Along with this it is educating people in a proper manner in making use of honey. This magazine advises eating the good natural foods which have not been refined and devitalized until little or no food value remains. Honey, of course, is truly a natural food. It also brings out using honey for flavor as well as a sweetening agent.

The following are just a few of the many splendid recipes, tried and thoroughly proven which this magazine gives to its readers each month:

Baked Bananas

6 large bananas
6 teaspoons honey

Wash and wipe bananas. Remove one section of the skin, and loosen the remaining skin. Put in a shallow baking dish and spread each banana with one teaspoon honey. Bake quickly till tender. Serve hot or cold.

Fruit Bread

1 quart cracked wheat
1 quart water
1 cup dates
1 cup figs
1 cup apples
2 cups raisins
½ cup olive oil
2 cups honey
Salt

Soak wheat in water over night. Add fruits, cut fine. Then add olive oil, honey and salt. Knead thoroughly and shape into loaves. Steam two to three hours, then dry in oven about thirty minutes.

Pineapple Omelette

1 pint grated pineapple
5 well beaten eggs
1 tablespoon butter
Honey to taste

Add eggs last. Bake in buttered pan till brown. Serve hot.

Health Ice Cream

1 Shredded Wheat Biscuit
2/3 cup honey
1½ pints thin cream

Combine wheat biscuit, honey and cream, and allow to soak for approximately an hour. Pour into refrigerator tray and partly freeze. Then transfer to chilled mixing bowl and beat thoroughly with egg beater. Return light mixture to tray and freeze. Serve with sauce of chilled papaya concentrate as a sundae.

This publication is giving honey a splendid boost. In the March issue honey is mentioned twice, in the April issue nine times, in the May issue, four times and six times in the June number.

Benj. Nielsen,
Nebraska.

Not One Winter Loss in Twelve Years

By C. H. Pease,
Connecticut.

More than half of the bees in New England were dead last spring and in Rhode Island they reported a 90% loss—and that is some loss.

In your May issue, page 233, you had this to say regarding winter losses: "In the northern sections where the heavy snows and prolonged cold lasted, bees which wintered out-of-doors have suffered heavy losses. Cellar-wintered bees seemed to have come through in excellent shape."

In your October, 1931, issue, page 456, my article on "The Wintering Bugbear" told beekeepers how to winter their bees 100% perfect, regardless of weather, by a method that had at that time done it successfully for nine years, but I have yet to learn of one beekeeper who profited from my experience; they evidently prefer to lose their bees. Since that article was published we have gone through three more winters, the last being one of the worst bee-killers for outside winterers ever known in this part of the country, but one of the best for me, as every one of my colonies came out in fine condition and built up to swarming strength before I wanted them to. I had six swarms before the clover flow started; does this indicate that cellar-wintered bees, **in the right kind of a cellar,** are weak and dwindling in the spring?

Some beekeepers may criticize me for allowing my bees to swarm, but I don't believe in keeping bees in a turmoil and stirred up every few days by going through them to kill cells; they do better when not disturbed, and, besides, think of the labor saved. When they swarm I "fix 'em," and they settle down to business, forget their "tomfoolery" and practically the whole colony spends its time pulling in the sweets, while the old queen is laying in a top super with a few bees, and a young queen is in the making in the brood chamber below. The temporary cessation of egg-laying in the brood chamber is no material setback in their honey gathering as the clover flow here in New England will be practically over before the bees from these eggs become fielders. Young queens with lots of empty cells for laying seldom swarm later in the season; if they do, you lose little or nothing, as the crop is already in the supers, and you are requeening by Nature's best method.

I have brought through a total of over five hundred colonies in the last twelve years (and we have had all kinds of winters in that time) **without the loss of one,** and I have complete records of every colony and every queen to prove it. This is not boasting; it is simply stating facts.

But speaking of winters: Who knows that the next winter may not be as bad as the last? Are you going to let the elements put you out of business? I'm not. All winters look alike to my bees, and wintering is the least of my worries. Those who prefer outside wintering are welcome to it; but why should I change?

Honey in Bakery Goods

By C. M. Litteljohn
Washington

BAKERIES of Puget Sound are now widely distributing new-baked loaves of bread of which honey is the main feature, while a vogue for honey in pastry is growing in this section that bids fair for more wholesome bakery goods of every category.

The Tacoma Bread Company, whose large baking plant is located at 2836 South I Street, in the Puget Sound city, has produced a new loaf of bread for Tacoma housewives known as the "honey loaf," since each loaf contains generous quantities of golden honey, as well as pure milk and other ingredients. Thousands of loaves of this new bread are sold daily by the grocers of the city.

In Seattle the Carnation loaf is a honey bread appreciated by the residents of this Puget Sound metropolis. For this bread the slogan is used, "Honey Makes It Fresher," and the honey ingredient is strikingly stressed.

How honey improves pastry and other fine examples of the baking art was a feature of the honey division of the Western Washington Fair at Puyallup, Washington, this autumn, when prizes were won for the manner in which honey was utilized in such pastry products.

Class 513 of this big northwestern exposition consisted entirely of "pastry prepared with honey." There were cash awards made as first, second and third prizes for the outstanding display of pastry, confections and other foods prepared with honey and of which not less than six appetizing varieties were shown.

In this pastry division varieties alone scored twenty points, diversity being developed by this department; and texture of the products made with honey was valued on the basis of another twenty marks. Chief virtues, however, of the pastry prepared with honey were in the general appearance and flavor. The first of these qualities, inspiring the appetite, was awarded thirty-five points, while the flavor that was the bequest of the bee scored another twenty-five per cent.

Honey and milk are now being widely adopted in the production and popularizing of graham crackers in the West by several chains of baking plants. One of the first to pioneer in the field were the Tru Blu baking plants that are now a part of a large national chain. Many other plants of the Pacific Coast and Northwest turning out the popular graham crackers secured new appeal and consumer acceptance by new "milk and honey" recipes.

Progress with honey as an ingredient is now being furthered by one of the large baking chains of the Pacific Coast bringing out a specific "orange honey" graham wafer to add new allure and acceptance on the part of patrons who have now learned to expect graham wafers to be made of a flow of "milk and honey."

Orange honey is featured in the distinctive packaging, colorful labels and the window displays of this large bakery chain that prominently center attention upon the new type graham wafers. This orange honey graham wafer is featured by the Van de Kamp chain of attractive Dutch shops.

A new light is lent to honey as a principal part of a graham wafer. From the adoption of orange honey there may be local loyalty shown in the Northwest to the clover and fireweed honey of that section, to the white sage honey of California and to the many varieties of honey in different parts of the nation—an excellent tip to graham wafer bakers in this new era of competition which, as Eddie Cantor says, is all theirs.

Hefting Hives to Determine Stores

This method is employed by many beekeepers to ascertain in the quickest possible time whether or not certain colonies need to be fed. Especially is this procedure apt to be followed in early spring when it is not so desirable to have hives open for very long. However, it certainly is not a very reliable way of determining the amount of stores a colony may possess. One may be easily misled by the weight of the hive in hefting it. For it sometimes contains quite a goodly amount of pollen rather than honey.

Benj. Nielsen,
Nebraska.

New Bulletin

"Beekeeping in New Hampshire" is the title of a new bulletin by J. R. Hepler, issued by the State University at Durham.

It is an interesting and concise publication giving just the information needed by the beginner with bees. It contains sixteen pages and covers the field from hives and equipment to seasons' management. Those interested should write to the university for a copy.

Let the Bees Suit the Climate

By Leo Traversy,
Inspector of Apiculture,
Quebec.

Among the rules of heredity there are exceptions called anomalies. An anomaly or mutation results from the fact that many descendants are normal on one side and abnormal on the other, resulting in monstrosities of all kinds both in animals and in vegetables. For example the four leaf clover, the five legged sheep, the hen without a rump, young bees with no wings. One day while working in my apiary, one of my brothers called my attention to a bumblebee with purplish red eyes.

Anomalies in man are frequently caused by alcoholism or syphilitic diseases.

The degree of anomaly is very unsteady and I do not think it necessary to go into details. If the reader would like information, refer to "The Sudden Transformation of Living Creatures" by Blaringhem. It is a doctrine of transformism which tells us that anomalies or monstrosities may give rise to species or varieties other than those which have procreated them; that an inferior creature may create a superior one.

The principal hereditary factors are not only resident in the cellular necleus but they are also to be found in the cytoplasm or nourishing part of the cell. In it all the chemical reactions take place such as destruction of molecular structures, building up of new structures, combustion, elimination of waste and production of reserve. All these reactions constitute the building up of the form and give it the necessary energy to live. This cytoplasm or nourishment in the cell is like royal jelly to the queen while she goes through her metamorphosis.

Some account must be taken also of cases where characters are the result of functions depending closely on conditions of climate and environment. This brings me to speak about adaptation, accommodation, fixation and as a conclusion of our study, we will see whether it is advisable to improve black bees and to adopt them instead of the Italian bee.

When a breed of bees originally from the warm countries continues to live in a cold one like that of Quebec, it is necessary that the bee goes through a period of acclimatization and fixation. An effort which must be painful during a certain period of time when the bees endure the conditions and new way of living until at last they have adapted themselves or become naturalized.

This accommodation or naturalization is relative phenomenon susceptible of diminishing or disappearing, because there are species which after many years of existence disappear because of the influence of the sphere in which they live. For example, the Havana tobacco which if we try to cultivate it here has no real success. Certain varieties of pansies from the South bloom very well the first year and then fade away the second year. The plantations of maple trees in Europe have not given good results. It is the same with many different kinds of animals.

The Italian bee originally came from the coast of the Mediterranean and was brought to the southern states with all the qualities for acclimatization in a warm country. Let us ask ourselves: "Is that bee so beautiful and gentle and prolific, capable of giving the same results in a cold country as our black naturalized bee which has gone through three phases of accommodation?"

Nine-tenths of the Italian colonies in Quebec issued from Italian queens of the South or from package bees, in increasing numbers from year to year. In spite of this, we still count today 41,738 colonies of black bees or hybrids with prevailing qualities and character against 64,000 colonies of Italian bees of recessive character which will probably degenerate under the necessities of their environment. Proof of this is the difficulty which the breeder of Italian queens in our province has to raise queens having the uniformity, the character and qualities of the bees of the southern states, even though they are mated by Italian drones. Here if the Italian bee is bred with the black bee, the color and characters of the black bee such as nervousness and agitation invariably appear.

There is no doubt that climate, nourishment, soil and other environmental factors are the cause of coloration, and various characters of breeds of bees.

I have no antipathy for the Italian bee. My apiaries are composed of two hundred colonies of Italians. I have tried hybrids, black bees, Carniolans and Caucasians. The Caucasians from the Caucasus Mountains in Russia which is a silver-grey bee, is very gentle, quiet and very rustic.

That Name

Mr. Kouba's remarks on page 48 about the "foul" part of the disease name are well taken, but if we are to abandon this expressive, though uncommon, term, then why not go farther and also do away with the ambiguous and misleading terms "American" and "European" while we are about it? These words in connection with our bee diseases are certainly meaningless and ridiculous.

The writer has been favorably impressed with the terms "larval" and "nymph disease" applied to European and American foulbrood respectively by some European countries, and I would like to submit these names for the consideration of American beekeepers. I doubt if any clearer and simpler terms can be selected.

J. Skovbo,
Oregon.

Washington Products Week Spotlights Honey

By C. M. Litteljohn,
Washington.

Observance of "Washington Products Week" brought into the limelight the amazing diversity of honey and honey products now being produced in the great Pacific Northwest commonwealth, whose new wealth seems to lie in her honey production, of which she may well be proud.

The special seven days that put the spotlight on honey, along with other leading products, was the result of a proclamation of Governor Clarence D. Martin, emanating from the gubernatorial offices at Olympia, to be celebrated in eastern Washington no less than western Washington, where equal diversities of honey exist.

Washington Products Week served to make better known the clover, the apple blossom, and the fireweed honey of the state, the varied products of diversified pasturage and fields of the still "wide open spaces" of the sparsely settled state, and of pioneer producers in some of the outlying regions, especially the logged-off lands with their spectacular fireweed, and fire wood.

Power of cooperation is strikingly illustrated by the special week during which Washington citizens focused attention on the many natural, agricultural and industrial products of the state, and had many new opportunities for checking its output and noting its expansion in new directions.

While there is probably no complete list of the fairly large army of honey producers and beekeepers, particularly the smaller ones with a few hives, nevertheless, honey production waxes in importance in many sections of the state, and new records for both quality and quantity are being achieved. The slogan brought to the fore for Washington Products Week, "What Washington Makes, Makes Washington," has great significance to the honey men, since "What the Bee Makes, Makes Washington Famous."

How Shall We Combine Honey With Other Foods?

By P. E. Braun,
Nebraska.

Bees are a sideline with me at present, being engaged in the oil business. I produce honey on a small scale and merchandise it through my station. In spite of attractive packages, many people will not buy honey because they tire of it after a meal or two.

Therefore, if we could blend honey with other sweets or foods to give a new flavor, it might open a large, new market. As I am not smart enough to figure out any blends or combinations, it might be well for our big men to work on that instead of production problems.

I am primarily a merchandising man, being engaged in selling most of my life. As I see it, we are doing a pretty efficient job of producing honey, but much of it is merchandised very inefficiently; in fact most honey sells itself.

We of the oil business are constantly on the lookout for new products and new selling methods that are just a little better than we have had. On the other hand, honey producers and packers depend on the same old product and same old methods year after year. The only new thing we have had for several years is cellophone wrappers, which are good.

Any line of business is not only engaged in competition within itself, but every commodity is competing with other commodities that will answer the same purpose.

Honey is competing with any number of other foods that will answer the same purpose. We of the beekeeping fraternity know that it is nature's health sweet and all that. The trick is to convince some skeptic that does not like honey.

There is no reason that we, as a nation, should consume a hundred pounds of sugar per capita and only two or three pounds of honey. I think that it is mostly in the merchandising.

I keep honey in our local stores, but they do not sell a great amount of it, and that mostly in pound lots. I push it at my place of business and sell it mostly in five- and ten-pound lots.

If I had something to blend honey with, I could sell pure honey to those that like it and have my blends to offer those that will not buy pure honey.

I would like to have this question discussed in the journals. That way, perhaps, we can work out something that will be of benefit to the industry.

Beeswax for Shoe Repair

This will work. I have tried it for years. When shoes wear up rough, iron in a piece of beeswax on the rough spots with a hot iron. Melt it in and let it dry and the shoe will never wear up rough again at that spot. A New York subscriber.

An Illinois Honey Stand

Here's a picture of my stand at Geneva. I have to stay out here in the stand all day on Sundays so I am writing a few letters while I am not busy.

Ross Morrill,
Illinois.

Southern Market Grows

It is interesting to note the increase in output of honey by the well known firm of T. W. Burleson and Son, of Waxahachie, Texas. In addition to the large amount of honey produced in their own and other southern apiaries they are contracting for about 200,000 pounds of comb honey in shallow frames from the sweet clover regions of the North.

T. W. BURLESON

The Burlesons have been extensively engaged in the production of honey and the sale of live bees for many years. They have been among the enthusiastic supporters of the American Honey Institute since they could see the immediate effect of the work in increased demand for their own product.

They buy honey from widely distributed points to make the blend which they sell as "Burleson Brand Honey" since it is no longer possible to produce enough in their own vicinity to meet their needs.

It is estimated that they will pack a million pounds of honey this season. The amount of chunk honey or bulk comb honey used by this firm indicates something of the extent of demand for this article in the southern states.

Bees Do at Times Destroy Capped Queen Cells

Please erase as soon as you can that **not** in "Bees Do Not Destroy Capped Queen Cells," on page 61. This statement is too sweeping. They will do it at times as I have found to my sorrow. Nuclei with plenty of stores or nuclei being fed will seldom destroy cells, but those short on stores are very likely to do so.

Allen Latham,
Connecticut.

Nu-Spread

A new honey product "Nu-Spread," packed by the Hygeia Company, of Salt Lake City, is winning a hearty response in the Mormon state, one of the leading honey producing and consuming states of the West. This product is packed in 9½ oz. cartons and wrapped in cellophane which makes it an appealing pack.

The product spreads like butter and has a different, new taste brought about by a melting and refrigeration process which recrystalizes the honey. It resembles the former Kreme Whipt honey product put out by the Mountain States Honey Producers' Association which was brought about by a whipping process.

The product is being boomed as "Satin Smooth," "Flavor of the Flower" and is going over well, dealers report.

Glen Perrins,
Utah.

A Battle Between Bees and Ants

By David G. Sanborn,
California.

F. H. Wymore, of the entomology division of the College of Agriculture at Davis, California, had occasion to lend assistance in connection with a battle between ants and a colony of bees near Strawberry, in El Dorado County. The ants threatened to destroy an entire colony of bees. William G. Watkins, the owner, tried to combat the ravishing army but was quickly put to route by the infuriated ants, who attacked Watkins when he tried to carry the hive from the vicinity of the ants' nests.

Mr. Wymore said that the use of calcium cyanide and carbon disulfide was the means of destroying the ant horde. Although not uncommon in California, little is known of these ants, **formica rufa obscuripes.** These ants inhabit only the higher altitudes of about 1800 to 4500 feet above sea level.

The tenacity, ferocity and boldness of the little insects is a most interesting feature of the account of this battle at Watkins' hives. Watkins had but recently moved his bees from its winter quarters to a small meadow near Strawberry in El Dorado County. The vicinity was already inhabited by the ants who lived in nesting mounds built by excavating soil from around the roots of plants and vegetation and piling the dirt in a cone-like structure. Some of the ant nests were six to eight feet in diameter at the base and two and one-half to three feet in height. The center of each nest was filled with sticks, pine-needles and decayed and partly decomposed vegetable matter. In the mounds most of the ant broods are housed. About 30 or 35 of the nests were found on an acre of ground near the beehives.

Immediately Watkins had moved his bees there, the little insects paid the newcomers a visit, and attacked them. The bees made a heroic effort to repulse the ants. Soon the ants had the bees cowed and bottled up in the hives from which the ants dragged them bodily, after tearing off the wings and legs. In many cases the body of the bee was dissected into smaller pieces so they might be easier handled.

On discovering the situation, Mr. Watkins began moving the hives away from the ants. The ants then attacked Watkins, biting his arms and legs and swarming over him so that he was forced to retreat before the furious assault of the little insects.

Mr. Watkins finally poured gasoline and oil over the mounds and set fire to them. The ants refused to admit defeat and attacked the flames, trying to push them back by throwing their bodies against them. The gasoline burning treatment hardly held the situation in check for a few days until Watkins got in touch with the College authorities.

The chemicals brought by Prof. Wymore to the aid of Mr. Watkins' distressed bees were put to use and the ants were quickly exterminated. The calcium cyanide in dust form was blown into the top of the ant mounds. The moisture from the earth served to liberate the cyanide fumes which of course are very deadly. Mr. Wymore says that the ants are probably the same species as those used by the Indians in early days in California to torture their victims, after staking them out or burying them up to the neck.

That 5 Per Cent Limitation

We are not hearing much either for or against the code for honey producers except that a few have objected to the 5 per cent limit on increase. I would be well pleased if Uncle Sam were to hand me a 5 per cent check to pay for the colonies that I **decreased;** just as the hog is being paid for by the poor devil who tries to buy a bit of pork.

J. H. Sturdevant.
Nebraska.

Mrs. Jensen in Action

Malitta Fischer Jensen of the American Honey Institute is shown in action as she demonstrated honey cookery and honey combinations to interested homemakers, at the Nebraska State Fair. This is just one of the many ways in which she works to obtain greater recognition of the value of honey as a food. In the glass case on her right hand are displayed tempting honey prepared foods. Before Mrs. Jensen are stacks of recipes which were liberally distributed to further the larger consumption of honey.

Just beyond is seen the honey lemonade stand which was very generously patronized.

Mrs. Benj. Nielsen,
Nebraska.

Chas. Kruse, the author of these comb honey articles.

Disease and Wintering

By Chas. Kruse,
Illinois.

This is the last article by Mr. Kruse on comb honey production. He has been entertaining and instructive. We hope any readers who wish to ask questions about Mr. Kruse's methods or equipment will be sure to do so. They will be published with the answers.

AMERICAN foulbrood has cost many beekeepers their financial liberty. The man who cannot combat this disease with success will eventually be compelled to quit keeping bees. **The beekeeper who cannot control foulbrood is a menace to the industry.**

The inspectors know this to be true. At times the inspector is almost helpless to render service because of negligence. Those who have learned to control foulbrood know it to be a blessing in disguise. Without question it eventually eliminates the weak.

The control of American foulbrood is much easier in comb honey production than in the production of extracted honey. There are many excellent ways to control it, but should you use any shaking method whatever, there is one thing to remember. The bees of a diseased colony have honey in their sac. This honey **must be coaxed** from them by crowding.

Here is a simple remedy that will work during a honeyflow. Suppose we find a colony with a few cells of American foulbrood. It is marked at once. Should your hives be in long straight rows, the diseased colony should be removed to a quarantine yard and treated there.

Toward the end of the flow is an excellent time for treatment. Should there be one comb **that does not contain brood** shake the colony on this comb, pay no attention to the queen but be sure she is with the bees. Leave the bees forty-eight hours. Make sure they have one super of half drawn sections during this time. The incoming honey will force the bees to disgorge and store the honey in their honey sacs in the super. After forty-eight hours, you will find some newly built comb. Remove it and also remove the comb you left in the hive body.

Now give the bees a set of drawn comb, then you are through. **This treatment remember is only to be used during the honeyflow.**

Should there be no honeyflow, heavy feeding will give equal results provided you remove the super. This super will contain the diseased honey the bees were forced to disgorge.

Now what to do with the diseased combs. One teaspoonful of cyanogas will destroy the brood and any chance of bees from the diseased combs.

Now, how shall we treat the combs so they may be used again with safety? Unseal every cell of honey. **Be sure you do this.** Extract the honey from the combs.

Now have a tank ready. An old oil barrel will do. Of course the barrel must be clean. Make a good padded cover for it so that the formaldehyde gas which you use will not escape. Place your combs in tight formation in the barrel.

Weight them down with stones or any heavy object. **Make a disinfecting solution of 20 parts water to one part formaldehyde.** Add a little dissolved soap as a spreader.

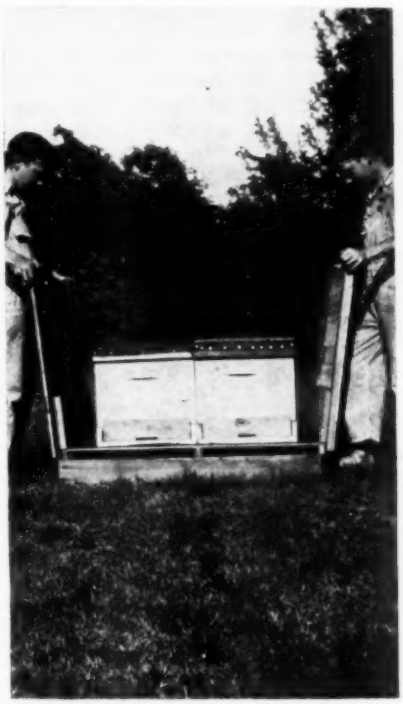
This is one quart of formaldehyde to each five gallons of water. Mix enough solution to submerge the combs fully and come two inches over all. Put on your cover, weight it down. Leave the combs in the solution **ten days,** then remove the combs and extract your solution.

If you have facilities for washing the combs, all the better. If not, rinse them and remove the water. Now take the combs to a bee tight room. Stack them criss-cross for airing.

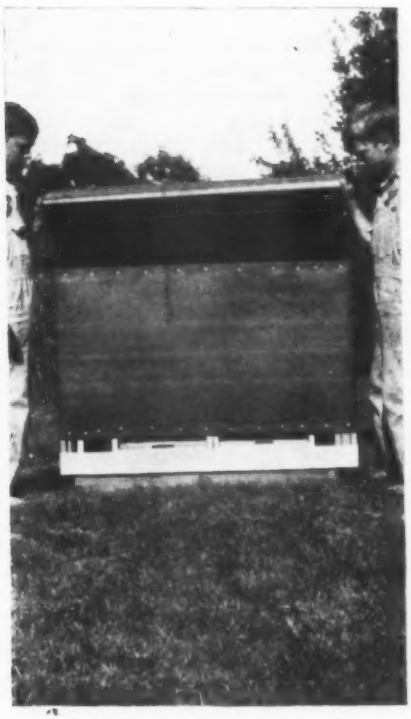
In two or three weeks, look over each comb for cells of honey. When you find a single cell, fill a medicine dropper with pure formaldehyde, stick it in the cell of honey, flush the solution up and down until it reaches the bottom of the cell. If you miss a cell of honey, your work will be in vain.

Part of a crop of comb honey. Note the piles of supers in the rear.

A pair of colonies ready for the packing case, bottom in position.



Colonies in position. Killion's two boys placing sides of case.



Ready for the straw; cover in position to close the case for winter.

Don't throw away the solution. It may be used five or six times by adding one quart of formaldehyde for each batch of combs to take care of the gas lost by evaporation. If you are careful, you will find this treatment will work without fail.

Last Examination

When the last supers are removed after the fall flow, all colonies are examined for queenlessness and disease. The queenless colonies are broken up at once. Diseased colonies are marked for destruction. The first day on which it is too chilly for bees to fly, one teaspoonful of cyanogas is placed on a piece of tin and shoved in the entrance, with the entrance closed and the bees and brood will soon be dead. If you disinfect these combs in cold weather, remember it will take longer for the gas to act. Therefore, they will have to be left in the solution longer.

Wintering

Cellar wintering is by far the best method for latitude 42 North. It is surprising how little honey is consumed in cellar wintering. A normal colony of medium strength will rarely consume more than five pounds in the cellar provided the honey is good white stock. The two inch bottom board already described in these articles with the false bottoms removed is ideal for cellar wintering. Of course the bees in the cellar are given the benefit of the two inch entrance. It will please you to see the cluster hanging beneath the frames.

Your cellar should be well drained. It should not be too wet or too dry. When too dry, the bees are given water by spraying water lightly at the entrance. A tested thermometer should hang about two feet above the cellar floor and the temperature should be held at 45° F. When below 45°, a little fire should be started. Don't use a coal oil stove because it uses the fresh air too fast and the bees suffer from lack of oxygen. A small coal stove or electricity is best.

When the outside temperature rises above 45°, the cellar should be ventilated. Your cellar, of course, should be dark at all times.

Arrangements should be made to let in fresh air but not light. A well drained hillside is ideal because the bees can be taken in and out of the cellar on a wheelbarrow.

Alas, in cellar wintering the owner of the bees must stay with them as they need attention, with the rise and fall of outside temperatures. Below the latitude 42, however, outdoor wintering is the rule although it takes more stores. A good light packing case is ideal because it makes the work of packing easy. See the pictures with this article for the packing case. No further details of wintering are given because of lack of space.

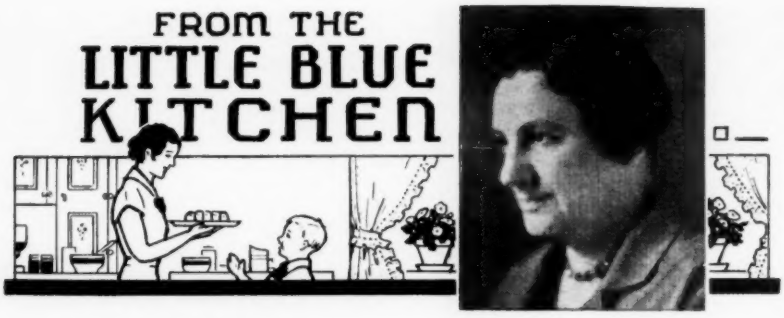
In all these articles on comb honey, the writer has given the truth from his experience based on twenty-five years of experience. I hope that all my readers have been benefited by them.

Proven Method of Displaying Honey

A grocer in a large city, one who caters to high class trade, displays honey in glass by means of an electrical arrangement which throws or sends light through the honey from behind the jars. This makes such a tempting and beautiful display that the desire to buy is created instantly upon seeing this liquid sweetness resembling imprisoned sunshine. This merchant moves large quantities of honey by this method. It has been proven over and over again that people do buy to a large extent "by the eye." Cost of maintaining this display is slight as it is not necessary to use a large bulb for lighting.

Another grocer places honey in a window in the side wall of his store. This makes an attractive display, too. The light shining through has much the same effect as an electric light arranged behind a display. This grocer is also on the list of those energetic, up-to-date merchants who sell honey instead of just stocking honey and waiting for a call for it. Display good quality honey where it can be seen to advantage and it can truly sell itself. Benj. Nielsen,
Nebraska.

FROM THE LITTLE BLUE KITCHEN



EDWIN GOES FISHING

(A little poem for our smallest readers.)

Edwin went a-fishing
In a little brook;
Had no fancy fish-pole;
Had a home-made hook!

But when he came homeward
On a twig he brought
Two fine little fishes
He had proudly caught.

Edwin's mother cooked them
In her frying pan;
Now all Edwin's buddies
Think him quite a man!

Lida Keck-Wiggins.

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SOMETIMES, as well as we know the busy little bee, and as "ordinary" as he seems to us, we **may** learn a little philosophy of life from his conduct. For instance Honey Lady knows three or four boys who pal around together on the Reservation where she lives. The other day all came into quarters "stung up" in quite a frightful manner. "How cum?" asked Honey Lady, as she ran for the baking soda. "Well, you see," said "Chicky," "we boys decided we would rout out a bunch of bees who have one of those home-made hives (a hornet's nest, Honey Lady decided inwardly) on top of the tea room. We had a lot o' stone along and we did rout the bees okay and caught some of them in a box. Red's got **that** and goin' to try to start a beehive, but do you know **before** we threw a single stone half a dozen of those big bees dashed out and stung us."

"Well?" said Honey Lady. "Why did they do it when they didn't know we intended to stone 'em?"

"How do you know they didn't know it, son?" asked Honey Lady smiling, as she applied a little pat of dampened soda to Chicky's worst worst "bites?"

"W-h-y, why of **course** a bee wouldn't know a thing **ahead** of time, would he?"

"Yes, child, I think he would," Honey Lady replied and the small lad was silent. Like the old southern woman Honey Lady used to know, he was, no doubt, "keepin' up a pow'ful lot o' thinkin'."

Now if any of Blue Kitchen readers think Honey Lady was just romancing, she wishes to explain that in a really scientific magazine she read recently that when human beings go out to hunt dumb animals or to "rout" out bees or birds or other wild creatures, the "murder-intent" thoughts set up certain vibrations in the ether which are distinctly felt by their would-be victims, and serve to warn them. If they can escape they will; if not they may attack.

Perhaps much wiser people than Honey Lady will still have their doubts, but it might be well for us all to take this to heart, especially when we go after other human beings to "get even" or to do them sort of harm. Perhaps they too will feel the vibrations of hate and unkindness and fight back. Yes? Well, that's Honey Lady's story and she's goin' to stick to it!

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Not so long ago a kindly reader of the Blue Kitchen wrote in to say that her doctor has prescribed honey in her diet instead of sugar as she is afflicted with arthritis. Then she added: "Sugar, as we know, turns to acid in the system so that is why he prescribed honey for me."

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This paragraph from U. S. Farmers' Bulletin 653 under "Honey and Its Uses" may have been read by some of Blue Kitchen readers, but it is worth re-reading and Honey Lady can vouch for the fact that its advice is entirely practical:

". . . A honey cake made with butter will keep its quality until the butter grows rancid and one made without butter will keep fresh for months and even improve in flavor. What is true of cakes is also true of the dough; it can be kept almost indefinitely. Evidently, then, honey is especially useful in recipes without butter. For this reason most of the honey cakes experimentally studied in this laboratory were made according to the following formula which is typical of 'Honig Kuchen,' or German Christmas cake:

Three-fourths cup honey
One-half cup sugar
Two cups or more flour
One-fourth teaspoon powdered ginger
One-half teaspoon powdered cardamon seed
One teaspoon cinnamon
One-eighth teaspoon cloves
A speck white pepper
A pinch salt
One-eighth teaspoon soda
One tablespoon water, and
Two ounces blanched almonds cut in small pieces, or chopped."

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If you happen to have an apple tree whose fruit is anything but good looking, being gnarled and twisted, but wormless, try cutting up the apples in quarters, removing the cores; but not the skins. Just cover with water, cook and strain through jelly bag; add equal amount of honey to the juice, boil and make into jelly. It's surprising what delicious jelly some of those disreputable looking old apples make when combined with nicely flavored honey. Honey Lady did this a year or two ago and the jelly proved so extra fine she actually got orders for it from a couple of men keeping bachelor's quarters and had to make a new supply to fill this demand. What she received for the preserve paid for the gas used in the cooking! There's a "depression killer" for you.

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The past summer Honey Lady had a chance for the first time in her busy life to go a-gypsying through fields and along country lanes and beside a lovely river. At first she just went for the exercise and to enjoy the beauties of Nature. Then one day she noticed something red shining from under a green leaf beside a meadow path. She stooped and found it to be a beautifully formed wild strawberry. From then on Honey Lady's eyes saw red! She gathered enough of the delicious fruit for tea time dessert. Then she remembered of having read that John Burroughs, whose "Slab-sides" (outdoor study) was located only about fifteen miles from where Honey Lady now lives, used to gather these wild berries and held them as his favorite dessert. She doesn't know whether he added New York honey or not, but **she** did, and the result was something never to be forgotten.

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On later rambles Honey Lady found luscious raspberries; later still, blackberries growing on vines, which trail the ground. These she gathered on sunny hillsides, in open fields and even along highways where her hikes led her; then one day she found a patch of "regular" blackberry bushes

The honey used in the Blue Kitchen is furnished for the good of the cause, by the New York State Federation of Beekeepers' Societies.

right by the roadside. Here day after day she came, and gathered the most beautiful berries imaginable. "But what," you are saying, "has that to do with Blue Kitchen Department of American Bee Journal?" Just this, my dears; Honey Lady made jam of these raspberries and blackberries with honey and sent many jars of it to a friend. This friend has always declared she "just hates honey," so Honey Lady "never shook a bush" but just sent the attractive pots with much love and duly labeled. Presently she had a letter from the friend saying, "I never tasted such marvelous berry jam in my life. It has the most wonderful flavor ever. May I have some more if I come for it?" She was told she surely **could,** so this self-same honey hater drove over one hundred miles to Honey Lady's home for more jam from the Blue Kitchen. If this friend by any chance reads this, Honey Lady begs she will forgive her, but asks that hereafter she will **please** not say "I just hate honey." Sometimes honey, like folks, is improved by the company it keeps!

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Honey Lady will just add for any one's information that she used equal parts of stewed fruit and honey, and cooked all "down" for twenty minutes over a very hot fire.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

FINDING QUEENS—PRODUCTION —PRICES

(1) Some of my bees have crossed with black ones until they are nearly all black. I wish to requeen them but I am not able to find the queens, I have read many articles telling how to find them but there are so many bees in the hives that when I take the frames out they are in great bunches and do not spread evenly over the combs. I have been as careful as possible not to disturb them when I remove the frames but the queen always slips away. Could you tell me how I can find the queens?

(2) What is considered a good average per hive of comb honey where the bees have good feeding ground of sweet clover and are fairly large swarms?

(3) How much more would they make if they were producing extracted honey?

(4) About what price is extracted honey bringing at the large market places, both light and dark? (Packed in 60-lb. can, also smaller cans.)

(5) Which do you consider the best honey producer—the leather colored Italians or the other Italians? Do you think Caucasians are better than Italians? Which do you think build up the quickest? IOWA.

Answer.—(1) To find the queen in a hive that is too populous, remove the hive and put an empty hive in its place. Then, take out the frames one after another, examine them for the queen. If you do no see her, shake the bees in front of that empty hive on a sheet and let the bees crawl into the empty hive. You will readily see the queen as she walks among the bees to the hive. If you don't find her the first time, shake them out again until you find her. The empty combs must of course be kept in a safe place away from robbers. You will succeed sooner or later.

(2) The average per pound, of comb honey varies with strength of colony and quality of pasture. It is impossible to say. It may go from 10 pounds to 100 or more.

(3) In good seasons and with good management you should get at least twice as much extracted honey as comb honey from your bees.

(4) Extracted honey will vary from 6 cents to 12 cents in bulk.

(5) There is considerable difference in colonies, but not much in breeds. We rather prefer the leather-colored Italians.

USING QUEENS OF DISEASED COLONIES

(1) What would be the danger of introducing a queen from a colony of foulbrood to one without it? It is American foulbrood. Introduce the queen by herself in the C. C. Miller cages?

(2) What must be done for a colony having only a few cells of foulbrood?

(3) I have burned up the combs of several colonies and scorched the whole outfit with a blowtorch, is that sufficiently safe for use again?

(4) Is sun heat in a solar wax extractor sufficient to kill foulbrood in frames if exposed long enough? TENN.

Answer.—(1) I would dislike to introduce the queen of a stock diseased with American foulbrood to a healthy colony although I hardly believe that she would transmit the disease. You know that the disease is transmitted usually by the honey. So if the queen was hungry, it is quite probable that she would not abuse any transmission of the disease.

(2) If I had a colony having only a few cells of foulbrood and I wished to save it, I would destroy all its combs and leave it forty-eight hours in an empty hive, then give it some combs of brood and honey.

(3) Yes, if you have gone at it carefully, I believe those colonies will be safe, unless they get the disease again where they got it first.

(4) I do not believe that sun heat will cure foulbrood. It takes boiling water to destroy the germs of the disease, as far as I know.

QUEENS IN A SWARM

Will you please tell me have all queens that come out with a new swarm been mated? When some swarms get the swarming fever I get one, two, three or more queens; sometimes have found as many as five. PA.

Answer.—The first swarm goes out with the old queen. After that, the colony may wait till the first queen born is mated. But if they are too feverish, they may swarm, as you say, with three, four, or five queens. They sometimes swarm when the first young queen goes out to mate and the swarm may then run away with her. This is guess work. But if you watch your colony and destroy all cells but one when the first swarm goes, you may not have any trouble at all. It is quite a task to learn how to take care of the bees when they get the swarming fever. I have been troubled with it myself.

REQUEENING

When do you think is the best time to requeen bees and how often do you think it ought to be done? Our best honeyflow comes in March and April. I live in Johnston County. NORTH CAROLINA.

Answer.—The best time to requeen a colony is during a honeyflow. A colony ought not to be requeened oftener than once in about three years. But some queens are not good and it may be best to replace them oftener.

Usually we prefer to rear our queens from some extra good stock. If you take the queen and a small nucleus out of a colony, the bees may rear a dozen queen cells. If the queen is good, there is the opportunity to rear a number of queens by counting them on the ninth day, preparing as many colonies as you have cells to spare, on that day, and introducing those cells on the next day. You had better have a queen rearing book if you are going to rear many queens.

FINDING QUEENS—SIZE OF HIVE

Would like some information in regard to finding queens. My queens have had the run of the hive and would like to put on excluders. They are hard to find with so many bees in the hive.

Would you advise hunting until I find them or shaking the racks in front of hive, or would you advise using the solution that is used to drive bees down when honey is taken off? I forget what it was called. Do you think a single ten-frame hive is a big enough brood chamber from now until fall? MICHIGAN.

Answer.—To find a queen, if there are too many bees in the hive, just bring an empty hive and put in the place of your colony, lay a sheet or smooth cloth in front of the hive and shake the bees from the combs, one after another in front of the empty hive. It is unusual not to find her promptly. If you fail, do it over again. Of course you must put the combs of brood and honey in another hive, so they won't be visited by robbers.

A single ten-frame hive is usually a big enough brood chamber, but we like a little larger hive than the Langstroth. Our Modified Dadant hive has frames of the same length as the Langstroth but nearly two inches deeper and it proves better both for summer breeding and for wintering the cluster as there is more depth of honey in the brood chamber.

FINISHING OBSERVATION HIVE — THE FUTURE OF BEEKEEPING

I have made a few single-frame glass observation hives for displaying bees at the county fair each year. I used white pine wood in making these as it is easily worked, but I have not as yet painted or stained them. I would like your advice as to whether I should paint these say a gloss white or stain them with a walnut stain then give them a coat of varnish. Which would be better, paint or stain and varnish, and what color would you use? What is the usual way of finishing off such observation hives?

I would also appreciate a word from you in regard to your view of the future of beekeeping. I have been keeping bees for several years with fair success. I am a young man and believe I understand the fundamentals of the business. I think some of entering the business on a larger scale but hesitate because of the markets. I have been bottling what honey I have been producing and retailing it locally. The return has been fair. However, the local market is limited and I wonder if I went ahead and produced a large crop of white clover honey,

I could find a market at a price to give me a profit and yet be able to dispose of the crop. What is your opinion? Would you advise a young man to enter the business? What investment would be required (approximately)? What average return per colony could be expected over a period of years in the clover belt? Would you advise comb or extracted honey or both?

MICHIGAN.

Answer.—We can see very little difference in the question of painting those observation hives. Painting, to our mind, is better than varnishing. But this all should depend upon your taste.

Regarding your idea of going into the bee business on a large scale, the writer of this has built up in that business and believes in advising young men to do the same. Don't buy a large number of colonies, but build up from a small number by steady advance. The advantage in this is that you learn as you go, and if you make mistakes, they are not so expensive or discouraging as if you were working on a large capital.

As for being able to dispose of the crop, we never had any trouble, for the same reason that our sales grew as our business grew. We began with three colonies in box hives in 1864, and we have often said that we never spent any money for the bees that they had not paid for, themselves.

MAKING SYRUP

Please explain how syrup should be made to feed bees during winter.

NORTH CAROLINA.

Answer.—Our method of making sugar syrup for bee feed is given at paragraph 610 of our book, "The Honeybee," as follows:

"Dissolve two measures of the best granulated sugar in one measure of boiling water, adding one teaspoonful of tartaric acid for every twenty-five pounds of sugar used. Stir until the sugar is all melted. Feed while lukewarm."

If you do not wish to use tartaric acid, use about four pounds of honey for every twenty pounds of sugar. If you can do this, it will really be best. But not every man who has to feed bees has that much honey to spare. (Be careful about disease!)

For spring feeding, half the amount of sugar with the water will do very well provided the bees can take a flight every day.

MAKING QUEEN CELLS

Please give me some idea on making queen cells. I use a dipping stick but don't seem to get the cup just right shape. I use water on the stick and hot wax but can't get the cup built up right. MISSOURI.

Answer.—There is no great difficulty in making queen cells for artificial queen rearing. But if you cannot make them yourself you can buy them ready made from almost any dealer in supplies. Use an ordinary frame and put bars in it on which you will fasten the queen cells. In this way you can fasten some forty or fifty queen cells in a frame and if you are handy in the work you can put young larvae in them. In most instances you can rear dozens of your queens in this way.

After the cells are sealed, you can take them out and fasten each in a separate comb to introduce into queenless colonies. It takes only a little practice to succeed.

CELLS FOR REQUEENING

Can I requeen by taking a frame out of another hive with a queen cell on it, banishing all the bees off it and put in the one I want to requeen? Will the bees destroy the cell? If this will work when is the best time to get rid of the original queen?

KANSAS.

Answer.—It is not necessary to have a queen cell with brood in it on a comb. It is sufficient to have brood less than three days old in that comb. If the hive to which you give this brood is queenless, the bees will at once rear queen cells.

To replace old queens, the best time is usually the latter part of the summer. But queens may be reared successfully, whenever there are drones flying.

Remove the old queen that you wish to change and after removing her, give the colony a comb of young brood. Of course, if you have queen cells it will be still better, although you should not give these to the colony until the day after the old queen has been removed, so that they may know that they are queenless.

FOOD CHAMBER—UNITING

(1) Since two-body hives are recommended to be used during the winter and up until a few weeks before the honeyflow next year, is it necessary to have this second body filled with frame honey or just the plain hive body?

(2) I have two different swarms which haven't made enough honey this season to keep them over the winter; can I combine these two swarms and requeen? How shall I go about it? ILLINOIS.

Answer.—(1) One body only is necessary if there is enough food for the consumption of the bees during winter and spring.

A hive full of empty combs or an empty hive would be more damaging than useful. In fact it is advisable to remove all empty combs for winter.

With the large Dadant hive, we never use more than one hive body to winter the bees.

(2) The two swarms which you mention should be united. Kill the queen of the weaker colony. Then after a day or two, put the bees of that hive into the other hive. You can probably use the fullest and best combs of both hives to make the body of the colony.

Another Cost Bulletin

Another of the series of bulletins concerning the cost of production of honey is now available. This appears as "Circular of Information No. 100" of the Oregon Agricultural College, Corvallis. It is the work of A. S. Burrier, Frank E. Todd and H. A. Scullen.

This study deals with honey production in Oregon and is the second from that state. Material was secured from eigthy-seven apiaries operating 16,476 colonies of bees for the year 1932. The average investment per colony is shown to be $9.57 for extracted honey and $6.64 for comb honey. The greater part of this difference in investment appears to be in the value of extracting combs used by the liquid honey producers.

The average net cost of production per pound after allowing for interest on investment and depreciation of equipment was found to be 5.7 cents per pound, for extracted honey. For comb honey the cost was figured at $2.60 per case. Of this cost the actual cash expenditure for labor and supplies was found to be 1.4 cents per pound. The balance is represented in interest and depreciation. It is interesting to note that the cost to different bee men whose operations were studied varied all the way from less than three cents per pound for the most efficient to more than thirty-five cents per pound. Much of this difference was shown to be due to larger yields in the hands of the more favored bee men.

Those interested in a detailed study of this report will do well to write to the Oregon State College for a copy.

Honey From Red Clover

Remember the article "As I See the New Bee" by Dr. Watson? If his dreams come true, how about the commercial beekeeper? Every farmer, truck gardener and city dweller might have a few colonies. Apartments could be supplied with outlets so that they may have sweet factories right in their kitchens or parlors or wherever there is room for them. This would bring business to the manufacturers but it might be necessary to give the honey away.

All jokes aside, if a bee with a tongue long enough to draw nectar from red clover could be developed it would be a great help. Seed grown from the first crop of clover will, on the average, be of better quality. Red clover that blossoms in June has longer tubes than it usually has in the fall, when it is dryer and hotter.

I have had colonies produce as much as sixty sections of honey from red clover in the fall. Surplus from red clover then cannot be relied upon annually as weather conditions have much to do with it.

I have known people to say they did not like honey, if I try to sell it to them but if I gave them honey, they would gladly take it. It must be they think it is so cheaply produced, that I was trying to rob them if I asked them a price for it.

Harvey F. Arns,
Iowa.

An Echo From the Past

Andrews and Son, beekeepers' supplies, Winnipeg, get inquiries from all over western Canada. A recent letter asked them if they handled "the N. Y. State patent hive, with little trapdoors in the back and with top for supers."

I wonder if this is the hive that is so carefully described (and emphatically condemned) by Moses Quinby in his "Mysteries of Beekeeping Explained." He wrote in the 1840's, and so our inquirer must have had some recollection of these old patent hives, possibly lingering on in some back country district down to recent years. Hy. W. Sanders,
Manitoba.

Beekeepers Rally to Institute Support, and the Fight Must Go On

The American Honey Institute is undoubtedly passing through what will prove to be the most serious crisis it will ever have to meet. At the same time, we are having the greatest demonstration of loyalty among beekeepers that we have ever known. There always seems to be enough beekeepers willing to support any beekeeping cause that is truly beneficial to the industry. Two months ago it looked as though the Institute was absolutely doomed because of a lack of finances. With prospects for a very light crop and many bee yards depleted through winter losses and drought, prospects were black indeed. But, much to our surprise, many new individuals came to the support of the Institute in a way that was almost unbelievable, and outstanding among these were numerous southern friends of the Institute. It was indeed fortunate that the southern breeders had a good season for had it not been for them, the Institute would now be running on extremely short rations.

Space will not permit listing the names of every individual who responded to our campaign, and there are many individuals who deserve credit for the outstanding work that has been done. Northern beekeepers and leaders have made their contributions, but the good old Dixie states have made such outstanding contributions that a few of the leaders may be mentioned at this time. I think one of the finest contributions was that of Mr. H. F. York in Georgia, who, without any great noise, slipped express orders for $100.00 in an envelope and attached a little note saying he believed in the Institute and was glad to be in a position to give it a little support. Then Tommy Atchison in Alabama sent in the individual contributions of his beekeepers, and good old Doc Stover in Mississippi crashed through with one of his new ideas which resulted in several hundred individual contributions through his donation of queens. Louisiana, the next state in line, reported through Mr. Bohne that contributions were coming in and that Louisiana would go over its quota. Away out in the state of Texas, there are three or four individuals who are taking time off from their regular duties to pass out pledge cards and secure donations from Texas beekeepers. Guy LeStourgeon and Tommy Burleson are hard at work, and to these men and many southern queen breeders and package bee shippers our beekeepers owe a debt that will be hard to repay. And let us not forget to give our praise to the bee journals, all of which have given without cost much space and many editorials in behalf of the Institute.

But the battle is still not decided; funds are in sight to carry the Institute until November 1, and it will not be difficult to continue the Institute until January 1, but how will we manage after that time?

It is not pleasant for members of the Finance Committee to have to continually make pleas for funds, but with the knowledge that every beekeeper who knows of the good work of the Institute is appreciative of what is being done, we feel it our duty to keep you informed of the situation and to ask your help in maintaining the great publicity campaign for honey. After all, the American Honey Institute belongs to the American beekeepers and to the industries founded on beekeeping. **A good job has been started, and we must not let our efforts lag!**

H. F. Wilson, Chairman,
American Honey Institute,
Finance Committee.

Honey Shipments on Puget Sound

By C. M. Litteljohn,
Washington.

Swing to and fro of honey shipments during the year 1933 through the door of Seattle on Puget Sound is interestingly revealed in the statistics recently compiled by the Port of Seattle, for its Year Book for 1934.

While imports of honey are way, way down for the year (regarded as a healthful sign for the domestic producers growing in volume around Puget Sound and the logged-off west Washington area, as well as east of the mountains, around the so-called Inland Empire), exports of honey are doubled for 1933 as compared to 1932, with eight tons of honey shipped from Seattle to points on the Atlantic Seaboard, where none had been shipped during the previous year.

During the year 1932 the only honey exported had been four tons for the United Kingdom—but in the year just closed there was sent through the Port of Seattle double this amount, or eight tons, for consumption on the reverse coast from the Pacific, where it is anticipated new markets will be developed.

Exports of honey from Seattle, even with the 8 tons that represents double the volume of 1932, are much closer to a better balance of export and import trade, the latter being diminished greatly during the recent year, falling to only 31 tons, as compared to the 98 tons of honey imported into Seattle during 1932—although 20 tons of this were from the Gulf ports, but may have emanated elsewhere, such as the Central American regions.

Direct Central American importations of honey into Seattle for 1933 were recorded as two tons, precisely the same as for the year 1932. Guatemala honey, gathered by mountaineering bees high in the Central American mountains, feeding on the coffee-flavored berry blossoms of the coffee plants, is one of the high priced and well liked honeys in the Seattle market.

Notable among the import statistics is the reduction in honey shipments coming from the Hawaiian Islands. Honolulu honey suffered a great slump during the year just closed. Shipments merely totaled 29 tons from these Pacific islands, as compared to the 76 tons of Hawaii honey brought into Seattle during the year 1932.

Altogether the shipments of honey on Puget Sound, with an increase in exports, or double the comparatively small amount of the previous year, while imports have decreased enormously, is regarded as most encouraging by the domestic producers of varied honeys in the Pacific Northwest section.

Death of William Marshall

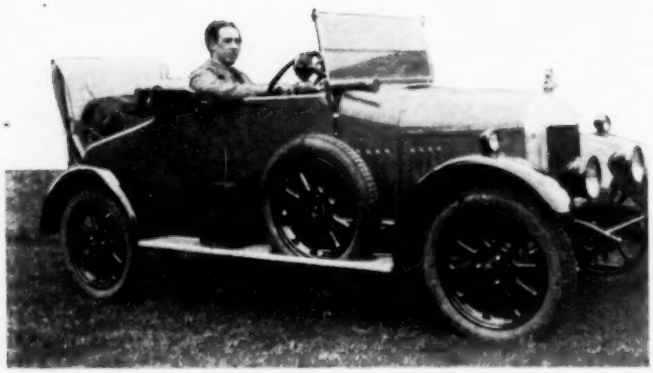
William Marshall, of Dekalb, Illinois, died from the effects of a fall at his home on July 27th. Mr. Marshall was seventy-three years of age and was enjoying good health up to the time of the accident which caused his death. He was picking apples when the breaking of a branch let him fall to the sidewalk below.

A beekeeper for forty years in the same location, Mr Marshall never lost his enthusiasm for the bees nor missed an opportunity to render assistance and encouragement to beginners. In one season he produced 9000 pounds of comb honey from forty-five colonies. The bees will remain in the hands of his son, Roy Marshall.

A Trick of the Bees

Postmaster Wall is of the opinion that he has discovered two new kinds of citrus fruits — and it happened quite accidentally. One is a cross between a grapefruit and a lemon and the other is a cross between a grapefruit and an orange. He displayed samples in his office yesterday and a little investigation revealed that the former would undoubtedly make a lemon turn green with envy —it was that sour, and the other had a flavor which was unmistakably blended. These phenomena were caused, he said, not by grafting or any other tricks of the trade, but by bees which carried the pollen from one fruit to another. He can explain it in no other way.

(Clipping from Tampa, Florida, Tribune, January 16. Sent in by Alfred Pering.)



A Picture of Commercial Beekeeping in England

By A. H. Bowen,
England.

ASKEP stock left in the garden by our predecessors started my interest in bees in 1907. Weekly notes on beekeeping in an agricultural paper decided me to venture with a frame hive for the first swarm. The next year, a good one, saw the apiary growing and the experience of taking off and marketing the first super of honey was something to remember.

About that time, thirsting for information, I chanced to meet an expert who owned bees in several outapiaries. A season spent under his tuition decided me to choose beekeeping as a vocation. I must confess to having had more "downs than ups," however. It was hardly to be expected that a novice could branch out without making mistakes. Ultimately the so-called "Isle of Wight" disease left me almost, but not quite, beeless. A fresh start had hardly been made when the World War broke out and beekeeping faded into the background.

To my relief, an inventory taken on demobilization in 1919 showed three colonies alive and a lot of empty hives still remaining just as they had been left. So here was the nucleus of a new business, to which a more mature experience was added, with better results.

The sale of supplies helped in fitting out the hives with bees, and queen-rearing enabled an increase to be made at reasonable expense. During recent years the prominence given by the press to beekeeping matters has created a wider demand for honey through an interest in bees themselves. There is a regular and growing demand for honey complying with the standard of quality and appearance now required.

With bees in six locations, in some of the richest producing areas of our Cotswold country, it is possible to ensure a supply of honey packed in suitable sizes for the retail trade, and to supply it all the year round.

Quick and reliable transportation by lorry and car has given commercial beekeeping a great push forward. Improvements in equipment and in management, which save time and make for efficiency, offset the drawback due to weather conditions, upon which no reliance can be placed in this country.

Cheltenham is conveniently situated for extensive beekeeping, since it lies on the edge of a locality rich in flora and with excellent traffic facilities for bees and honey for the northern markets.

Migratory beekeeping can be practiced in a limited way. Colonies wintered in the lowland fruit area may be divided and moved to the hills in June for the first sainfoin towards the middle of the month and the white clover harvest in July. A move of twelve miles embraces a district three weeks later in regard to the honeyflow. It is also economical to take bees from exposed apiaries and allow them to winter in the vale. This practice is often followed.

The bulk of my colonies contain Italian bees or their hybrids, with a proportion of blacks for comb honey. Between 150 and 200 colonies are kept. One outapiary is set apart for comb honey, two for rearing queens and bees, three for extracted honey.

Weekly visits keep swarming down. While some extracting is done at the apiaries, second crop supers are hauled to headquarters for extracting and the cleaning of combs, which are afterward stored. The honey is canned as it comes from the extractor, and heated later for bottling, when it is carefully strained and clarified.

The policy followed in the matter of honey marketing is to have an agent in each town—either a grocer or dairy—which on the whole take a particular interest in the line handled, which results in repeat sales.

We try to carry over a stock of honey from good seasons to offset the short seasons, but I, with my helpers, act on the principle of spending as much time as possible with the bees during the summer months to push forward the preparation of every item likely to be required during the rush period. Such work occupies our long winter and late spring in a useful manner.

Little Blue Kitchen Recipes

When baking pies where meringue is desired, lemon, for instance, you can "use up" a bit more extra honey by using the following recipe:

Honey Meringue.

1 egg white
1 tablespoonful honey
3 tablespoonfuls powdered sugar

To well beaten egg white add honey and powdered sugar; spread over pie. Put in moderate oven for fifteen minutes.

—:—

A frozen custard, for those with electric refrigeration available, may be made over this recipe contributed by Estelle M. Nolte, of Ohio, and which has been tried and re-tried with always satisfactory results:

Vanilla Custard Frozen Cream.

1 cup extracted honey
1 quart milk
4 eggs
1 teaspoon vanilla (any other flavoring extract may be substituted, if preferred.)

Directions: Beat together the eggs and honey, then stir slowly in the quart of boiled milk. Put on fire until it thickens. Add the vanilla, pour in tray of refrigerator and let cool. Then put in refrigerator.

As a Man Will

"Many lay the whole strength of their affections upon the things they fancie and therefore when they are taken from them (as Pharaoh's Chariot wheeles) they are drawn upon all foure and stick in the mud; yet they set their affections as the Bee her sting, with all their might and strength."

W. H. Hull,
Virginia.

Belliston Fire in Utah

Wilford Belliston, of Nephi, at Myton, Utah, lost heavily in a disastrous fire recently. Upon returning from a visit out of town, he found someone had set fire to his property destroying about 26 colonies of bees and his extracting house and equipment.

Glen Perrins,
Utah.

By G. H. Cale

SUCH a summer! Such a summer! No rule in beekeeping works in a year like this. Our worst unusual trouble has been the lack of water. In other years there have been times when bees bothered either the neighbors or those on the place where the bees were located until it became necessary to move them. This year, however, the trouble was universal.

Sometimes the bees would get started on stock tanks so farm animals could not drink. In other cases they bothered at pitcher pumps; at the drains of ice boxes; in chicken or hog troughs. Anywhere they could get water that suited their needs.

What is the best way to give bees water permanently so they will never bother? I wish someone would answer that for me. We have tried all kinds of devices, open tanks with corn cobs, salty water, good clean fresh water with wood floats, small containers and large; nothing suits.

— o —

Another unusual occurrence has been the loss of honey and of bees and combs through melting down. Quite a number of beekeepers in the hot drought area have reported similar loss. It is pretty hard to stand in a yard and see nice white honey and good beeswax run out into the soil and bees follow until the colonies are gone or so weakened that they are of no further value for production for the year.

In several cases, colonies melted down in shade. There was never any exact way to account for the vagaries in this occurrence. Some yards showed up the least loss from melting, others the most.

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In western Iowa, where we have two yards, bees worked alfalfa in August vigorously. This does not happen every year in Iowa.

— o —

Some comments came as a result of my suggestions about foulbrood resistance in the last number. This is a subject which should be kept alive, but of course it is one which cannot be done with any safety and in a thorough manner except by a well equipped research laboratory unless the beekeeper knows what it is about. Experimenting promiscuously with disease will not be profitable.

One suggestion, however, might be safe. Colonies marked for disease but having only a few cells if left alone often show later to be apparently clean. I have marked such colonies and followed them for a number of years without seeing any more disease. When this happens, the best of such colonies should be used as breeders from which queens may be raised with a chance that it may be of benefit.

— o —

Have you read the cost studies made at the Pacific Coast Bee Culture Laboratory at Davis? The cost production according to these reports for honey in Oregon is dangerously near the wholesale price of honey as it has prevailed the last several years. Present prices are better. What are we going to do about it?

— o —

In speaking of unusual occurrences for the season, another relates to the loss of queens in introduction. It has been our practice at times to put queen cages on top of the frames to introduce. During the heat of July queens so placed died because of heat. Now we either place them on the bottom board screen up or deep down on the comb, resting one end of the queen cage on the bottom bar of a frame with the candy hole up. At least they will be less apt to die there and it is more nearly like the position of queen cells that bees raise in supersedure. Possibly they will treat the queen a little better at this position.

— o —

How much honey does a swarm take with it when it leaves the hive? A small swarm from Kirlin's observation hive which he had kept in the limb of a tree where it was shaded to watch in idle moments, carried away with it at least one pound of sealed honey.

This raises the question of just how dangerous a swarm from a diseased colony would be. It certainly would carry quite a load of honey from the old hive. I have seen a number of bee trees which probably caught stray swarms with colonies just as thoroughly diseased with American foulbrood as I have ever seen in a beehive so I know that bees in timber are quite likely to have disease if it is prevalent in the locality.

Versatile Pacific Northwest Honeys

By C. M. Litteljohn,
Washington.

Amazing varieties of honey are produced from the diversified pastures and open fields, logged off lands, forests, and gardens of the states of Washington and Oregon—a variety inherent in the different kinds of clovers no less than a wide range of other profuse blossoms that are scattered over the "wide open spaces" of this popular portion of the West.

In western Washington and around Puget Sound some of the earliest honey has been with the rich and pungent flavor of the Scotch broom which bloomed in abundance early this year, and gave a deep golden color and fine aroma, to the product owing its origin to the dark yellow blossoms in city gardens, suburbs, and growing wild over the countryside.

From a light raspberry yield, due to rainy weather, however, but little may be expected this year from a source that lends delicious blend and flavor to the Pacific Northwest honey, although in Puyallup Valley of western Washington berries are the principal industry of the region.

In the realm of clover of the district, there is the white clover, the sweet clover, and the Alsike clover—all honey-producing clover — some commemorated in the clover honey of Washington which has depicted through the graphic arts the bee and the big clover blossom on the label.

Vine maple of Oregon and Washington, picturesque along the highway, offers a further distinctive yield, as do the locust or acacia blossoms, alfalfa cuttings, chittam, wild peas, buckwheat sage, and cotton bean. Sips from the Vetch and long heady draughts while buried in the saffron mustard of the lowlands give further diversification to the honey of this area so rich in bloom during the spring and summer season.

Furthermore to basswood, and the flaming fireweed the bees are indebted. Especially to the latter do they owe much, since the fireweed honey commands a premium, when attractively packaged and labeled; so wherever possible colonies of bees are moved to the tall, spiry wild-flowers which grow in abundance in the wake of forest fires to feed upon this delicate pasture.

To Do Good

Bees can with ease and facility dart in their stings, but they have no power to draw them out again. Hurt they can; help or ease they cannot. We are all naturally wise to do evil, but to do good requires greater understanding.—Culled from an early writer by W. H. Hull.

Is Propolis the Lost Ingredient of Violin Varnish?

By Wm. Grams,
South Dakota.

IF what I am doing is generally found to be true, that "sticky stuff" now often considered a nuisance may be worth more than either wax or honey.

This introdution may cause you to read further. I am not a professional beekeeper, just a back yard one. I came from Germany fifty years ago. When in Germany, I learned furniture, sash and door work. While in this country, I followed the carpenter trade. I do even the finest woodwork, using a planing mill nearly all the time. I have been here in this small town almost all the time since I came to this country and have kept bees here for over thirty years.

Nearly twenty years ago, I injured my feet and so was hampered in my work. To be doing something, I made a violin. I had made one or two before I came to this country so I had that in my head to fall back on for a pastime which was all it was then.

For top wood on the instrument, I used Black Hill pine which proved to be good for tone quality as I found out later. I made several violins at that time, for the work became very interesting to me. When I came to varnish them, however, I could not do it satisfactorily so I began to study violin making and violin history and found out what had been published about violin varnish.

It has been referred to as a lost art and that the varnish of the old violin makers had much to do with the tone of their instruments. This got me more interested. Here in South Dakota I cannot get to see a real old violin master make a violin, but about fourteen years ago, I was in Chicago and saw several instruments which I was told would sell for more than $5000 each.

I was looking for varnish principally. The varnish on these instruments was considerably damaged but what was there, interested me very much. I had a violin of my own make with me with an unsatisfactory finish on. It did not compare well with these old instruments and my violin, although of fair tone, was nothing to be compared with these old ones, although the workmanship in general was even superior on the instrument which I had made.

The varnish I used at the time I bought on the general market, paying as much as $3.00 an ounce for it but I could do nothing with it to come anywhere near the old masters.

I reasoned that the old masters did not have the chance to get material from other parts of the world as we have today and whatever material they used, they must have obtained close to their homes.

As a beekeeper, of course, I had to do with propolis and right here with me propolis is used in excess so I took a notion to try that sticky stuff on my violin. I could do nothing with it, gave it up for years. I had daubed some of it on blocks of wood and some of these had lain around. To my surprise, I found that after a year or two, some of the former smears had really turned out to be something.

I became interested again and kept on experimenting. For years, I have experimented without much results. Somehow, I had great faith in the possibility but I did not have the time to put into it.

About a year ago, I had the good luck (I call it good luck instead of bad luck) to fall from a scaffold as I was working on a building and was disabled for further work of that kind and so put in my time on the fiddle hobby. I kept on with the propolis experimenting and must say that more by accident than anything else, I fell on to a mixture that seemed just right. Propolis is the principal part of it. So simple that it is a wonder, if there is a lost art in violin varnish, it was not rediscovered before.

I am not prepared to say that the mixture I use is the real thing. I have no old instruments to compare with, but the outcome of the work and the simplicity is such that I am going to experiment farther with it. The use of propolis in this mixture is something which I am sure all beekeepers will be interested in. Understand this varnish of mine contains propolis as the principal part. The propolis is not used in addition to ordinary varnish.

Virginia Creeper As a Honey Plant

By C. W. Wood,
Michigan.

Observers of our native plants must have been struck by the fact that bees work incessantly among Virginia Creeper vines during their long blooming period. That they are not there through mere curiosity is a foregone conclusion. Why, then, has not our native species been exploited for nectar and pollen production. A little observation will show that the bees get both from these blossoms. I have asked a number of apiarists why these fruitful sources have not been made more use of, and the invariable answer has been that the plants are not plentiful enough to do any good. One might answer that buckwheat, orange trees and clover were not plentiful until men planted them. I ventured thus to an-

swer one honey producer, and he came back with the observation that the crops which I mentioned had their greatest economic importance in another sphere and that the honey crop was merely a by-product. That is undoubtedly true, but it is still apparent that many of the honey producers of this country are overlooking some good sources for nectar and pollen when they neglect our native plants.

It is not unlikely that all forms of this creeper have value as honey and nectar plants. That is a matter for further investigation, though observation makes it plain that the two forms, **Parthenocissus quinquefolia** and **P. vitacea,** are of importance. Their usefulness is not entirely economic; they have ornamental value in no small degree. The latter species is the hardier, but it will not cling to walls like the other, being useful, though, to cover arbors and trellis work and to grow among trees. The former is useful in all situations, clinging to walls with great tenacity; and its spring and fall foliage is very showy. A plantation of these two species would furnish a crop of flowers all during June, July and August. They may be propagated by means of hardwood cuttings—as in the case of grapes, to which they are related—from fresh seeds sown in the fall in an outdoor frame or by layering.

Cans for Melting Wax

A handy can for melting wax can be made in a few minutes by cutting the top from a 60-pound can and putting a wire handle on it. A wire coat hanger, such as cleaners use, makes a fine handle and is of a good length. Straighten out the hanger, shape like a handle, punch two holes in the can, one in each corner about three inches from the top, and insert the wire.

Orville B. Rogers,
Iowa.

[A wooden handle with beveled edges tacked across the center of the top of the open can is also a good handle.—Editor.]

Ob. Hive Not a Sales Help

So much emphasis is placed on the attraction of an observation hive. But we have found that it is no inducement to buy honey. The hive certainly is a drawing card in securing a crowd and people are keenly interested watching the bees and trying to catch a glimpse of the queen. So interested, in fact, that they don't think at all about honey. Seeing the bees in their native abode instils no desire to secure the product of the busy little workers and desire is essential before sales can be made. The observation hive has never sold a pound of honey for us.

Benj. Nielsen,
Nebraska.

Valdosta Meeting

Programs for American Honey Institute, American Honey Producers' League, Bee Shippers of America and Apiary Inspectors of America are ready now for the big Valdosta meeting in Georgia, December 17-19. Plan for this big event.

All beekeepers who will attend are asked to drop a card to the office of the American Honey Institute, Madison, Wisconsin. Special plans are being made by the Southern States Conference to make this meeting a very pleasant one. Lodging facilities at the tourist camp at Valdosta are particularly reasonable. Don't forget—December 17-19, Valdosta, Georgia.

Another Doctor Suggests Honey for Health

At our August meeting, Dr. Ray O. Lee, of Kansas, made a good talk on combination of food for health. He advises honey instead of sugar.

The following officers were elected for the Association: O. A. Keene, Topeka, president; J. F. Rule, Chanute, vice-president; Geo. Garner, Sabetha, secretary. No one reported a very big crop.

Geo. Pratt,
Secretary.

Winners at Missouri State Fair

Dr. Park, Ames, Iowa, judge at the Missouri State Fair, rated the honey display as good for any season. Supt. Clay T. Davis claims a larger number of entries than last year. The honey this year is well cured, thick and heavy. Mrs. Claire Montgomery, Home Demonstration Agent, was judge of the honey cookery.

Awards

For best and most attractive display of apiary products, 1st, Ollie Kerby, Sedalia; for best general display of light extracted honey, Carl Neef, Boonville, Missouri; best and most attractive dsplay of comb honey, Carl Neef; best 12 two-pound fluted jars cut white comb honey, Carl Neef; best 12 two-pound fluted jars cut amber comb honey, Carl Neef; best two dozen one-pound round jars of white extracted honey, Carl Neef; best two dozen one-pound round jars amber extracted honey, Carl Neef; pyramid of six most perfect sections, Carl Neef; best single sections, Carl Neef; best 12 two-pound jars, candied white honey in 1933 and 1934, W. A. Scott, LaMonte; best cake of yellow beeswax, Ollie Kerby, Sedalia; best cake of white beeswax, Phillip Neef, Boonville; best worker combs, W. A. Scott, LaMonte; best Italian queens and bees, Ollie Kerby, Sedalia; best golden Italian queens, Carl Neef; best Caucasian queens, Carl Neef. Honey cookery, best 12 pint-jars assorted fruits and berries, canned and sweetened with honey, Mrs. Roy Hulse, Oak Grove; best honey fruit cake, Mrs. Roy Hulse, Oak Grove; best light honey cake, Mrs. Geo. Landes, Sedalia; best dark honey cake, Mrs. Geo. Landes, Sedalia; ½-gallon honey vinegar, W. T. Hull, LaMonte; honey candy, Mrs. Roy Hulse; honey cookies, Mabel Dunlap, Osceola; honey muffins, Mrs. E. H. Hildebrandt, Sedalia; honey doughnuts, Mrs. Jas. L. Kiniry, Kansas City, Mo.; honey cinnamon rolls, Mrs. Geo. Landes; jelly roll, Mrs. Jas. L. Kiniry; fruit pie, Mabel Dunlap.

We will give recipes for the prize winning honey cookery awards in future issues.

The grand champion man was Carl Neef and the grand champion woman, winning the most ribbons, was Mrs. J. L. Kiniry; the grand champion woman, winning the most cash, Mrs. Roy Hulse.

In addition there were special awards to the man exhibiting in the most classes, Carl Neef; the woman exhibiting in the most classes, Mrs. J. L. Kiniry. Carl Neef's total amount of cash won was $51.60.

Aid Promised Utah Beekeepers

Beekeepers of Utah are highly elated over the aid promised by the government which permits them to buy sugar for their bees. Loans are now being negotiated, according to Frank Austin, in charge of federal drouth relief feed loans in Weber Count. George S. Glen, manager of the crop production loan office in Salt Lake City, has given authority that the loans for bee feed may be made in emergency drouth areas at the rate of 50c per month per colony.

Glen Perrins,
Utah.

Annual Meeting of Bee Equipment Manufacturers' Association

The first annual meeting was called to order at Hotel Stevens, Chicago, July 31, with the following firms represented: Dadant & Sons,

QUEENS
OF THE BEST QUALITY

With our queens you can reduce swarming. With our queens you can reduce winter loss. Our bees have never been exposed to disease. Prompt shipping and high quality make it pleasant for our customers. Untested, 1 to 9 queens, 70c each; 10 to 24 queens, 65c each; 25 to 49 queens 55c each; 50 or more queens, 50c each. Tested queens double the price of untested.

TAYLOR APIARIES, Luverne, Ala.

JOSEPH DUSEK COMPANY
726 WEST RANDOLPH STREET, CHICAGO.

HONEY WANTED
COMB AND EXTRACTED

Write for Rubber Stamp, shipping tags.

(*Reference, First National Bank*)

SEPTEMBER
A GOOD TIME TO REQUEEN

Will continue producing queens at the following prices:

Three-Banded Italians	Only
1-9	70c ea.
10-24	65c ea.
25-49	55c ea.
50 or more	50c ea.

Pure mating. No disease. Safe arrival and satisfaction guaranteed.

The Crowville Apiaries
RT. 1 WINNSBORO, LOUISIANA

Are You Asking—"*How Shall I Sell My Honey?*"

The best market is the home market, and there honey well packed in good looking containers sells best.

Our cans, glass, cartons, pails, and selling helps will turn the market your way.

Get your copy of our Fall Price List and Selling Helps Folder. Either price list or folder of selling helps FREE for the asking.

Send for your copies to

Dadant & Sons, Hamilton, Illinois

Mott's Northern Bred Italian Queens *Practically Non-Swarming Not "hooey"*

August, September: 75c each; 25, 70c each; 50, 65c each; 100, 60c each. Fair to good breeders, $2.00, $3.00, $5.00 each.

E. E. MOTT & SON, Glenwood, Mich.

W. T. Falconer Mfg. Co., G. B. Lewis Company, August Lotz Company, A. I. Root Company, Ohio, and A. I. Root Company of Iowa.

In the opinion of President Calvert the industry will be required to continue under the operation of the NRA for a least another year. The Bee Industry operates under the Farm Equipment Code. Officers of the Association are: President, J. T. Calvert; Vice-President, Leslie Martin; Treasurer, George C. Lewis; Secretary, H. L. Ashworth.

Dane County Beekeepers Vote Price Increase

Minimum price schedules of wholesale and retail comb and extracted honey were agreed to August 3 by the newly organized Dane County beekeepers of Wisconsin at the meeting in Madison. This price agreement binds the beekeepers to a price about 100 per cent above the wholesale market for comb honey quoted by Chicago and Oconomowoc buyers. An estimated 75 per cent of normal yield prompted beekeepers to this action.

It was agreed that the minimum wholesale price for first grade comb honey will be 15 cents a section; grade No. 2, 12 cents. Extracted honey, No. 1 white, $4.20 for 60-pound cans; 88 cents for 10-pound; 48 cents for 5-pound; 15 cents for 1-pound jars.

The retail price schedule for comb honey, No. 1 grade, 20 cents per pound; No. 2, 15 cents per pound; extracted, grade No. 1, 10-pound pails, $1.10; 5-pound pails, 60 cents; 1-pound jars, 20 cents.

New officers—L. W. Parman, Madison, president; G. N. Ranum, Mt. Horeb, vice-president; Samuel Post, Shorewood Hills, secretary. An attempt will be made to secure 100 per cent membership in Dane County.

Wisconsin Trade News Bureau,
Wisconsin.

Second Outdoor Meeting of Cook-DuPage Association

This was held at Brother Frederick's Apiary, Techny, Illinois, July 21. First vice-president Young advised beekeepers not to rob their bees too close this year because of dry weather. Bees will consume quite a bit more honey yet. Mr. Wooldridge, County Inspector, reported considerable foulbrood in the county and advised beekeepers to beware of robbing around bees. Then Mr. Jankowski, Inspector from Lake-McHenry Counties, reported new infection breaking out there. He reports 50% of the bees in Boone County still in box hives. Mr. Duax, State Inspector, suggested a fine and a reward for the conviction of anyone spreading foulbrood.

After a picnic dinner Brother Frederick invited the beekeepers to visit his honey house and to visit the printing shop, museum, chapel and the beautiful grounds. There were sixty-five in attendance.

Leroy Stockdale,
Secy.-Treas.

Mini-Cassia Reports Good Flow (Idaho)

We are pleased to report a good flow in this locality. The bees bring in from three to 8 pounds a day. The monthly meeting of the Mini-Cassia Honey Producers' Association was held at Minidoka Dam, with Mr. Van Riper as host. There was a talk by Mr. E. J. Farnsworth, "Extracting Honey." About fifteen members and their families enjoyed the occasion and a picnic lunch.

Idaho bee laws were discussed with the expectation of new laws being drawn up at the next session in January.

Frank Beach, Jr.,
Secretary.

Vigo County (Indiana) Stages Good Time

We certainly had a great time at our field meet on July 14th. We left Deming Park about ten in the morning and made a tour of the four best apiaries selected by Inspector Alexander. Mr. Wallace made a motion picture of the apiaries; press photographers made group pictures. This was in the nature of a contest to select the best kept apiary. Judges were Geo. Cain, Marion; Herman Sample, Jamestown; Frank Wallace, State Entomologist, Indianapolis.

We returned to Deming Park at noon for lunch, with music by an accordian band from Paiges music store. C. L. Duax, of Illinois, Chief Apiary Inspector; Carl Killion, of Paris; W. A. Rushton, former president, were the speakers. A collection of $5.00 was taken for the American Honey Institute. Judges reported prizes awarded — first to Wm. Bridges, second to Everett Fagg, and third to Ferd Havens. The group then went to the Herrington Apiary where Benj. Wilkins, of New Augusta, made a hat of live bees; Herman Sample and T. F. Jones put worker bees in their mouth! There were eighty-four beekeepers registered. I saw several not registered—probably a total of ninety from nine counties in Indiana and three in Illinois.

Wm. A. Pogue,
President.

Fifty-Seventh Annual Meeting Texas Association

The Texas Association met July 30 at College Station for their annual meeting, at the same time as the Farmers Short Course at the A. & M. College.

Dan O. Baird, of the Sam Houston Teachers' College at Huntsville, with his lecture "Educating the Public to Be Bee Wise," was outstanding. His

talk was illustrated by colored posters which were made by the Art Department of the Teachers' College. The room contained also an exhibit of live bees in observation hives. These hives were made by the Manual Training Department of the Teachers' College. Dr. Baird recommended the use of observation hives to increase the sales of honey.

There were fifty beekeepers at the meeting. A roll call for honey production revealed that the average yield in Texas would not be more than one-third of normal and that the number of bees in the state had probably dropped one-third the past year, due to drought and the low price of honey.

The second session was devoted to commercial beekeeping and honey flora. Honeyflows in southeast Texas proved more dependable than elsewhere as the sources of nectar are hardwood shrubs and trees. It was well agreed that woody vines were the best honey producers. By the proper separation of honey from different flows, as good honey can be produced in eastern Texas as elsewhere.

The Beekeepers Buzz, a social affair, was held at the home of Dr. and Mrs. F. L. Thomas, was a five reel film on fruit pollination by the honey bees, a fine film from the laboratory at Washington.

The last session was an enthusiastic one. Mr. T. W. Burleson, of Waxahachie, made a fine appeal for support for the American Honey Producers' League and the Honey Institute. The response was good.

Miss Lola Blair, of the Extension Service, and two assistants with large baskets, took possession of the speakers' stand and of the secretary's table and prepared a luncheon. Each article contained more or less honey.

At the business meeting a resolution was adopted, insisting every beekeeper present this year bring at least one visitor to the next meeting. Officers are: Geo. M. Jeffus, President; H. B. Parks, Route 1, Box 368, San Antonio, Secretary-Treasurer; T. W. Burleson, delegate to American Honey Producers' League; W. O. Victor, Alternate; Whitman Coffey, delegate Southern Conference; H. A. Victor, Alternate.

The Texas Queen Breeders and Package Dealers Association held their annual meeting immediately following the Association. Roy S. Weaver was re-elected President and Whitman Coffey, Whitsett, Secretary.

H. B. Parks,
Secretary.

Saskatchewan Annual Convention

The Saskatchewan Convention at Regina boasted sixty attendants. This meeting showed that there has been an amazing growth in the Association the past five years. Four or five years

WRITE FOR SAMPLES AND PRICES

Crystal clear jars of strong simple construction in four sizes—Individual, Half Pound, One Pound and Two Pounds. And the new Bee Hive jars, attractive for table use, with definite label space. In Half Pound, One Pound and Two Pound sizes. Gold or white screw caps.

HAZEL-ATLAS GLASS CO.
WHEELING, W. VA.
SALES OFFICES IN ALL PRINCIPAL CITIES

HALF MILLION
MERRILL'S QUALITY QUEENS
have been used in 25 years, we believe they are good, you try them and let us know how they work for you.
PRICES—ITALIAN QUEENS—1-9, 70c; 10-24, 65c; 25-49, 55c; 50-99, 50; 100-250, 45c; 250 or more, 42½c.
MERRILL BEE COMPANY, BUCATUNNA, MISSISSIPPI
Mississippi's Oldest Shippers

HONEY SELLING MONTHS JUST AHEAD

YOU CAN HELP
to create a better demand for your honey by assisting
THE AMERICAN HONEY INSTITUTE
to contact

NATIONAL HONEY WEEK
NOV. 11 to 17

Write the Institute for program.

Cards and Leaflets available at cost to members.

Doctors
Food Company Dietitians
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By sending your membership to
AMERICAN HONEY INSTITUTE
Room 310 Commercial State Bank Bldg. Madison, Wisconsin

SELLING HELPS for Your Honey

Beekeepers are learning to sell honey locally, thus avoiding the glutted central markets. Our honey folders are ideal in this respect, and for distribution at roadside stands.

Honey Leaflet

Four pages. Cover in four colors. Explains fully but briefly the value of honey, its uses, and gives a few recipes. Name and address of beekeeper with honey prices if desired. Fits ordinary envelope. Sample free.

Prices postpaid with name and address, etc.:
100, $2.00; 250, $4.25;
500, $7.50; 1000, $11.50.
Each additional 1000, $9.75.

Eight Page Honey Folder

"Sweetheart of the Flowers" Short description of what honey is, how produced, harvested. How to keep it, and other data of general interest. A full page of honey recipes included.

Prices

100	$1.00	250	$2.50
500	4.50	1000	8.50

Extra for printing your name and address: 250 or less, 95c; 500, $1.25; 1,000, $1.90.

American Bee Journal :: Hamilton, Illinois

"EAT HONEY" STICKERS

To paste on your letters, envelopes and packages.

A constant honey advertisement.

White letters on ½"x2" red paper —"Eat Honey"—Gummed for use.

1000, 40c. 100, 20c. Postpaid.

AMERICAN BEE JOURNAL
Hamilton, Illinois

LABEL PASTE

Liquid paste for sticking labels on tin or glass. We guarantee it to give satisfaction. Will keep indefinitely if kept closed. Many satisfied users. Solve your paste troubles with some of our

STICK-TITE PASTE

Quart Can **65c** Mailing Wt. 3 lbs.

(postage extra)

American Bee Journal
HAMILTON, ILLINOIS

ago the membership was only fourteen. The honey crop shows a steady gain. Last year it was 925,000 pounds, this year it is over a million. There are about 2500 beekeepers in the province. This year the Association purchased between 4,000 and 5,000 packages of bees from Alabama for its members.

F. H. Fullerton,
British Columbia.

Southern Illinois Beekeepers To Get Together

The St. Clair County Beekeepers' Association is extending invitations to southern Illinois beekeepers to get together for a meeting at Waterloo, Illinois, on September 9, 1934. Speakers will be present to talk on beekeeping and on the marketing of honey. All southern Illinois beekeepers and any others that are interested are invited to attend this meeting.

G. L. Hankammer, Secretary,
St. Clair Co. Bekprs. Association,
719 W. Monroe Street,
Belleville, Illinois.

Honey At The Fair

(Continued from page 401)

wax should be clean, bright and golden. When possible, various items in the display should be labeled. The public is always curious and ignorant.

One feature in a recent display impressed me. It consisted of a glass frame containing twelve sections. The first was merely a folded section. The second contained a sheet of foundation, the third had the foundation slightly drawn; the fourth was a trifle farther advanced and so on through the different stages until the final square was a splendid example of a well filled completely capped section of comb honey. Such displays are spectacular, educational and attract favorable attention.

If I myself were in the position of an exhibitor about to prepare a honey display to enter in competition, I think I would lay out a program like this: (1) Learn who is the judge. Find out all you can about him and his experience with honey and opinions. (2) Thoroughly familiarize yourself with the rules of competition. The judge must abide by them too. (3) Enter an exhibit in every class. This is for the sake of the sweepstakes prize which is awarded if the score card system is used. (4) Give myself plenty of time for preparation to assure opportunity of perfecting every detail. (5) Keep in mind the educational purpose of a honey exhibit and aim to impress the public with the attractiveness and healthfulness of honey. (6) Maintain uniformity throughout from the individual sections of comb honey to the set-up of the entire display.

My Experience With Sericea

By Geo. A. Roberts,
Pennsylvania.

There was an article in June "Will Sericea Replace Sweet Clover?" I had some experience with Sericea (Lespedeza) which may be of interest.

I bought an ounce of Sericea Lespedeza seed a year ago last spring; planted it on very poor soil which would hardly grow buckwheat. By the end of the summer, the Lespedeza had grown to a "tremendous" height of about eight inches. In all that time it never bore a blossom or flower.

My place is at the edge of the woods in a good hunting region. Deer eat the blossoms off the buckwheat. Rabbits nibble at the alsike and sweet clover. Once I planted tomatoes. As soon as a tomato would begin to turn red, the birds would devour it.

The Sericea Lespedeza is resistant to the attacks of these denizens of the forest. I could never see where the Sericea had been nibbled by anything. It is difficult for me to believe that it is as valuable for hay or pasture, therefore, as some assert.

The first light frost in September killed the Sericea to the ground although the clover remained green until November. Up to June 18 there was no sign of life in the Lespedeza patch. Last winter was severe, I admit. The clovers came through and were in full bloom at that date. White sweet clover was beginning to bloom.

I may be mistaken, but it seems to me you might as well try to raise bananas instead of potatoes as to replace sweet clover with Sericea Lespedeza. It may be possible down South, but if Sericea is to succeed in Pennsylvania, even as well as sweet clover, it must be of a hardier variety, than I have planted. I bought my seed of a reputable firm in Tennessee, supposed to handle the most hardy of Sericea Lespedeza.

New Style Container

Specimens of a new style container for packing honey are shown to producers of British Columbia by the Department of Agriculture officials. It is a wood fibre product and has the following advantages over tin and glass: (1) It is half the weight of tin and lighter than glass. (2) Much cheaper than tin or glass. (3) Made in Canada. (4) Destructible by fire when no longer needed.

Department officials favor it for this last reason. Foulbrood and bee diseases are often spread by honey containers thrown out in the garbage and visited by the bees. This new container gives them an agency through which to educate consumers to destroy those no longer needed.

F. H. Fullerton,
British Columbia.

Wanted White Extracted Honey
Send Sample and best price Frt. Paid to Cincinnati, O.
THE FRED. W. MUTH CO.

LADY-LIKE CAUCASIANS

Our Mating Guarantee Is Your Protection

Queen Prices

1-9	10-24	25-49	50-99
70c	65c	55c	50c

The stock is true. The breeders are well selected. Every queen is guaranteed to be mated to a Caucasian drone. Send for free Caucasian circular.

CAUCASIAN APIARIES Brooklyn, Ala.

Jensen's "Magnolia State" Three-Banded Italians
RIGHT NOW SERVICE

It is our policy to treat everyone fairly, and to make no claims we cannot substantiate. You have a right to the truth in advertising as well as in the quality of the product itself. Our customers' recommendations speak louder than our own ballyhoo. Our business is bees and queens; successful because through our efforts to improve our strain, you are succeeding with them.

Ashcroft, B. C., Canada.
July 6th, 1934.

"Dear Sir:

Received fifteen queens shipped on the 2nd. Queens and all attendants arrived alive. You are the promptest shipper of queens I have ever tried. Have bought queens from you off and on for past ten years and they have averaged well. I may have to increase the original order yet."

Prices balance of season: Select Untested: 1-9, 70c; 10-24, 65c; 25-49, 55c; 50-99, 50c; 100-249, 45c; and 250 or more, 42½c each. Package bees at Code prices.

JENSEN'S APIARIES, Crawford, Miss., U. S. A.

CHOOSE LABELS WISELY
YOU CAN'T GO WRONG WITH A-B-J LABELS
They sell honey and are priced right. *Send for Complete Catalog.*
AMERICAN BEE JOURNAL, HAMILTON, ILL.

WALTER T. KELLEY

PADUCAH, KY.

I beg to announce that I have moved my factory to Paducah, Kentucky, from which point I will be able to serve you better and cheaper than ever before. Many trains leave Paducah every day and the freight rates are actually less to and from Paducah to most points in the South (excepting Louisiana) than to and from Houma. This is why I moved to Paducah.

WAX WORKED INTO FOUNDATION

Let me work your wax into beecomb foundation this fall. I will do this on a cash basis or take my working charges out in wax.

QUEENS

Select laying Italian queen bees. Send your orders to me at Paducah for quick delivery.

1 to 9, 70c; 9 to 24, 65c; 25 to 49, 55c; 50 or more, 50c.

WAX AND HONEY OR WHAT HAVE YOU ACCEPTED IN TRADE

The WALTER T. KELLEY CO., PADUCAH, KENTUCKY

To assure yourself of obtaining the best of supplies, read the ads of A-B-J — when writing to them, mention A-B-J

DEPENDABLE ITALIAN QUEENS

Our Summer and Fall flow has begun, making natural conditions ideal for rearing extra fine queens.

INSTANT SERVICE

Orders received by noon are shipped same day.

PRICES FOR BALANCE OF SEASON:

1-9	10-24	25-49	50-99	100-249	250 or more
70c	65c	55c	50c	45c	42½c

CALIFORNIA APIARIES

J. E. WING, COTTONWOOD, CALIFORNIA

Attractive New Labels . .

For SUNBURST JARS (page 294)
For BEEHIVE JARS (page 327)

These fit exactly into the label spaces on either kind of jar. Write for samples to see how well they look and for prices.

American Bee Journal - : - Hamilton, Illinois

BETTER BRED ITALIAN QUEENS

Our queens are bred from the very best stock by well tried methods under my own personal supervision.

Will trade queens for wax or suitable merchandise.

QUEENS—	1 to 9	9 to 24	25 to 49	50 to 100	100 to 249	250 or more
	70c	65c	55c	50c	45c	42½c

All orders filled promptly.

CALVERT APIARIES :: CALVERT, ALABAMA

THE MODIFIED DADANT HIVE

A roomy, solidly built hive that will last a lifetime and make a first class home for your bees. Made of choice materials and finished to a smooth surface enabling you to apply a good coat of paint. Send for a catalog.

Dadant & Sons :: Hamilton, Illinois

When in doubt, refer to advertisers in the American Bee Journal . . When writing to them, mention that you saw their ad in this journal . . They too will appreciate it as well as we.

Wanted Shipments of Old Combs for rendering into Wax.

WRITE FOR FULL PARTICULARS

THE FRED. W. MUTH CO.

PEARL & WALNUT CINCINNATI, O.

Moore's Strain

Leather Colored Italian Queens

NORTHERN BRED

1 to 9	70c each
10 to 24	65c each
25 to 49	55c each
50 or more	50c each

World-wide reputation for honey-gathering, hardiness, gentleness, etc., since 1879. Safe arrival and satisfaction guaranteed.

J. P. Moore

MORGAN KENTUCKY

Flower Garden Enthusiasts

Send 10c for sample copy FLOWER GROWER—regular price 20c. A garden magazine devoted entirely to flowers and gardens. Invaluable information in every issue. Splendidly printed and well illustrated. Special introductory subscription—7 months $1—a 40c saving.

THE FLOWER GROWER
102 N. Broadway Albany, N. Y.

Mountain Gray Caucasian Queens

10 Years' Selective Breeding

Are easy to handle, good honey gatherers, they are pleasing others we believe they will please you. Untested: 1 to 9, ea. 70c; 10 to 24, ea., 65c. Select tested, $2.25. All guaranteed to please.

BOLLING BEE CO. :: BOLLING, ALA.

Stevenson's Golden Italians

The Bees and Queens of Quality

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Crop and Market Report

Compiled by M. G. Dadant.

For our September crop and market report, we asked reporters to answer the following questions:

1. How is the honey crop?
2. Will it equal last year in your locality?
3. How is honey selling?
4. Are buyers active and at what prices?

The Honey Crop

There is very little change in the honey crop over what was reported in the August issue. The main dry section has remained dry but other sections have had a fair rainfall so that perhaps the possibilities for a fall crop have increased somewhat since August 1. However, this may partly be overcome by the fact that the crop in some of the northern sweet clover sections has not turned out as well as was anticipated a little earlier, the crop falling far short of last year.

Some sections which have probably improved are northern California, the intermountain territory where alfalfa has come forth very nicely in the later crops and helped to produce some surplus. The northern sections of the central territory apparently are better than had been anticipated a little earlier with possibilities of a fall crop. The crop in northern Ohio and western Pennsylvania also has been very gratifying. This condition extends over into New York and the New England states. Although the loss of bees earlier in the season was heavy there, the crop has been very satisfactory. This also rules for Maryland and Virginia. The season remains short throughout the whole South extending from Florida to Arizona.

Crop Not Equal to Last Year

We believe there will be very few sections in the United States where the crop this year will equal 1933. There are, of course, spotted conditions even in states like Illinois which were hard hit by the drought. Some beekeepers here are getting a larger crop than they got in 1933 but are the exception rather than the rule and the total crop for the state of Illinois as well as for practically every other state in the Union we believe will fall short of what it was in 1933. Our guess now would be that the crop will not be over 60 per cent of 1933 even with the increased volume of sweet clover.

Honey Selling

Honey seems to be selling very actively. Throughout the drought sections, there has been practically no possibility of sorghum production and this means that the demand for this will have to be taken up by some other sweet like honey. Reports coming in from different sections would indicate that honey is selling very readily in a retail way and in some instances at a price which is well above 1933. On the other hand also a number of beekeepers state that they are holding to 1933 prices even in view of the shortage of the crop. There is an increasing number of beekeepers who are reporting that they doubt whether their bees will have enough honey to winter on and are worrying about having to feed for the winter or letting their bees starve.

Are Buyers Active?

Honey buyers and packers seem to be active in getting honey but are adverse in paying any heavy increase in price. As a matter of fact a heavy increase in price in carload lots of honey would wreck the structure of the package prices which have already been established for the season. What we mean is that if the packers have to pay a longer price for honey, it means that they will have to revise all of their honey prices upward and they are afraid that this may shut down on the demand.

We learn of some white honey in cars being sold at 6 cents f.o.b. shipping station, others on a similar basis which would net the beekeeper at least 6 cents f.o.b. his station after deducting freight. There are a number of offers on carloads of honey where cans are exchanged which makes for about the same price.

Recent offers on amber honey in California and Arizona indicates that the price would be 5 cents to 5½ cents f.o.b. shipping point.

In making the suggestions below on honey prices for the 1934-35 season, we have been governed not only by our own ideas and those of prices set by the large packers of honey but also by the suggestions of beekeepers who have reported. We hope that the prices as suggested will meet with approval. They are based also on a number of reports of county and other organizations recommending prices.

One thing which is disconcerting and that is a feeling on the part of some beekeepers that publication of prices in a journal like this one only tends to give the price cutter a chance to drop below and thus get the market. However, we believe the price cutter is less to be feared this year than any year in a long time. Below is our suggestion for prices.

	Car Lot White	Car Lot Amber	Ton Lots	1-60	10-lb. to Grocer	10-lb. Retail	5-lb. to Grocer	5-lb. Retail	16-oz. to Grocer	16-oz. Retail	8-oz. to Grocer	8-oz. Retail	Comb Section	Comb Case
Northeast	$ .07½	$ .07	$ .08	$ .09	$1.20	$1.50	$ .55	$ .75	$ .18	$ .25	$ .11	$ .15	$ .25	$4.50
Southeast	.07	.06½	.08	.09	.90	1.20	.50	.65	.15½	.20	.10	.14	.15	3.00
South	--	--	.08½	.09	.90	1.20	.45	.60	.15½	.20	.10	.14	.15	3.00
Texas	.06	.06	.06½	.08	.85	1.10	.45	.55	.15	.20	.10	.14	.15	3.00
Southwest	.05½	.05¼	.06	.07	.75	.90	.40	.50	--	--	--	--	.15	3.00
N. Central	.07	.06½	.07½	.08½	.95	1.20	.50	.65	.15½	.20	.10	.15	.20	4.00
Plains	.07	.06½	.07½	.08	.95	1.20	.50	.65	.15½	.20	.10	.15	.20	4.00
In.-Mount.	.06½	.06	.07	.07½	.70	.90	.38	.50	.14	.20	.09	.13	.15	3.25
Northwest	.06	.06	.07	.08	.70	.90	.40	.55	.14	.20	.09	.13	.15	3.25
California	.06½	.05½	.07	.08	.90	1.10	.47	.60	.14	.20	.09	.13	.15	3.25

BULK COMB—10% above extracted prices.
AMBER—5% to 10% below white prices.

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As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

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ITALIAN Queens. Northern bred, for Northern conditions.
Eugene Gordon, North Platte, Nebraska.

"SHE-SUITS-ME" queens. Prices after May 31, 80c per queen; 6 for $4.50. 12 for $8. Linebred, three-banded stock.
Allen Latham, Norwichtown, Conn.

PURE Italian Queens, good producers and gentle, one to nine 70 cents, ten to twenty-four 65 cents; twenty-five to forty-nine 55 cents. A. M. Kelly, Bell, Florida.

THREE-BANDED Italian Queens that produce good workers and gentle to work with at code prices.
Alamance Bee Co., Graham, N. C.

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QUEENS. A limited number of select Italian stock, warranted purely mated. No inbreeding permitted. 40 years experience. 50 cents each. Thos. Broderick, Moravia, N.Y.

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Kalona Honey Co., Kalona, Iowa.

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NEW CROP CLOVER HONEY. New fives and sixties. D. H. Morris, Swanton, Ohio.

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WANTED—Car lots honey; also beeswax, any quantity. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, Calif.

WANTED—HONEY and BEESWAX. Beekeepers will find it to their advantage to communicate with us. Please send samples, state quantity available and prices. CALIFORNIA HONEY COMPANY, Hamilton & Company, Agents, 108 W. Sixth Street, Los Angeles, Californa.

WANTED—All grades of honey, either carlots or less. Send sample with lowest price delivered Ripon, Wisconsin.
Schultz Honey Co., Ripon, Wisconsin.

WANTED—Carlots or less of white clover extracted honey. Mail price and sample to Clover Blossom Honey Co., Columbus, O.

WANTED—Extracted and comb, send sample and price delivered Ossian.
Peter Tangen, Ossian, Iowa.

WANTED—Carloads and less than carloads of extracted honey; also comb. Mail samples and best prices. C. W. Aeppler Company, Oconomowoc, Wisconsin.

WANTED—Water white, fancy comb and tupelo honey.
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WILL SELL fifty double-story standard hives of bees near Savannah, Georgia. Cypress hives, wired combs. Buy and get your own package bees. Three hundred packages possible in a season. Also sell 500 standard hives in excellent Virginia honey locations, with good markets.
Maxwell Brothers, Pamplin, Virginia.

FOR SALE—500 colonies bees in A-1 condition, will guarantee free from disease.
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COMB HONEY CARTONS. Send for samples. Odd lots at low prices. Give size and quantity you can use.
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PORTER BEE ESCAPES save honey, money, avoid stings; faster most efficient. Sample 15c. R. & E. C. Porter, Lewistown, Ill.

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The Beekeepers Item, San Antonio, Texas.

THE PINARD Nailless Queen Bee Shipping Cage. Send for Sample. Agents—Diamond Match Co., Chico, Calif.; Roy S. Weaver & Bro., Navasota, Texas. A. B. Pinard, Mfg., 810 Auzerais, San Jose, Calif.

SAVE queens. Safin cages now 15c. Ten for $1.00. Allen Latham, Norwichtown, Connecticut.

MISCELLANEOUS

PLANS FOR POULTRY HOUSES — All styles; 150 illustrations. Tells you the type to build for your particular locality. Secret of getting winter eggs, and copy of "Inland." Send 25c. Inland Poultry Journal, Spencer, Indiana.

LETTERHEADS, envelopes, lowest prices, quality considered. Samples, prices free. Beekeepers Printing Company, 1010 Eighth, Watertown, Wis.

BEST BEE HUNTING OUTFIT.
Will Grover, Bristol, Vermont.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the worlds news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

Some Beehives Have a Long Life

In Oakfield, New York, my old home town, there is a successful beekeeper, with about 150 colonies, who has bees in at least ten different styles of hives. Among them were the old so-called Langstroth, with the portico front, which must have been made more than fifty years ago; a group of Quinby hives; some old "Excelsiors," and, to my surprise, three "thin-wall" hives which I sold in 1900.

The owner said he had "picked up" this odd assortment of hives by gift or purchase at bargain prices, when the owners died and there was no one else in the family to take care of the bees, or when the original owner left town. Confirming what Mr. Dadant so often has said, the Oakfield man declared that his bees wintered best in his deep-frame hives . . . and produced the most honey the next season. The only thing standard in this apiary was the comb honey supers, and they had to be adjusted to many hives with boards at the sides or ends.

S. F. Haxton,
Pennsylvania.

Is the Public Ignorant?

Two people were looking at a section of honey I was trying to sell to a storekeeper. One said to the other, "It must take a good beekeeper to fasten this honey in these little racks so that it will not fall out when it is tipped over." It took considerable explanation to convince them that the bees had done the fastening. Is the public ignorant?

Harvey F. Arns,
Iowa.

Reading Is Profitable

During my spare time I find great pleasure reading bee books and magazines. I wonder if all beekeepers are that way. Years ago I thought I knew all there was to know about bees but as I read I don't go far before I find I was wrong. If you want to stay in this business, keep posted right up to the minute.

Jonas Collier,
New York.

Wanted Amber Extracted Honey
Send Samples and best price Frt. Paid to Cincinnati, O.
THE FRED. W. MUTH CO.

AUTUMN REQUEENING
with Jay Smith's Queens

invariably insures safe wintering and rousing strong colonies for spring and summer. More and more experienced beekeepers recommend autumn requeening.

"The queen I got from you in September proved very fine. They stood the winter splendidly although it was some cold, thirty below several times. I have raised some excellent queens from her."—W. H. Brown, Sabula, Pennsylvania.

"The queens I bought of you last year made more honey than any others in the yard and they do not run me out of the apiary every time I want to look at them."—T. W. Welker, Sandyville, Ohio.

We now have things going full swing, and can make prompt shipment of either small order or in hundred lots. A certificate of health accompanies each shipment.

Prices: 1 to 4, $1.00 each; 5 to 9, 95c each; 10 to 24, 90c each; 25 to 49, 85c each; 50 to 99, 80c each; 100 or more, 75c each.

We accept honey in exchange for queens allowing twelve queens to each case of 120 pounds of white extracted honey, freight prepaid.

JAY SMITH
ROUTE 5 VINCENNES, INDIANA

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Can be made to suit individual requirements. This picture shows a 50-inch, steam-heated **"WHIRL DRY"** made to special order for one of Canada's largest producers. These machines dry the cappings as they fall from the knife. No messy job afterwards.

For further particulars write
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NEW WESTMINSTER :: BRITISH COLUMBIA

PERSONALLY REARED QUEENS-Italians, Caucasians

1 to 9	10 to 24	25 to 49	50 to 99	100 to 249	250 or more
70c	65c	55c	50c	45c	42½c

We know how to rear good queens and we know how to deliver them to you in the best condition. Our stock as good as the best. We bar none.
ROY S. WEAVER & BRO., NAVASOTA, TEXAS
AGENT FOR PINARD NAILLESS QUEEN CAGE

WANTED -- HONEY
CARLOADS OR LESS CARLOAD QUANTITIES
White or Extra Light Amber Grading
Send us samples and best price, freight allowed New York.
HONEY PACKERS, Inc.
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The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

Interest in Vitex for the bees never dies. A Florida reader asks how large it grows. Vitex Negundo, the species which is so attractive to the bees, gets to be about fifteen feet high in warm climates. There is another species in New Zealand and one in the West Indies which are trees reaching a height of sixty feet when mature. Neither one of these, so far as I know, is found in this country.

— : —

Harrison Moore sends a sprig of wild buckwheat from California with the interesting statement that it yields but little nectar in his locality whether the season be wet or dry. Thirty miles across the valley it yields well. It is this strange behavior of the honey plants, yielding well in one locality and refusing to do so in another that offers so much uncertainty to the beekeeper in choosing a location. Until much more is known concerning environmental influences on plant behavior the beekeeper will continue to work much "by guess and by gosh."

— : —

This summer of 1934 has been one of unprecedented heat and drouth in the Mid-West. Day after day the temperature stood in the nineties and all too often went above a hundred to the great discomfort of the human race. Because of dry weather, crops were short and in many cases failed entirely. Oats were hardly worth cutting, there was little fruit and few garden vegetables. If it was the surplus of farm crops which has caused our troubles we ought to recover now since as far as the farmers are concerned the surplus has disappeared.

— : —

To add to our perplexities there has been such an infestation of chinch bugs and other insect pests as was never seen by this generation. Fortunately, sweet clover endures heat and drouth and beekeepers within reach of this crop have harvested a good yield of honey. With all the threats we have come through surprisingly well and have fared better than we expected.

— : —

Reports from southern California indicate that the beekeepers are faced with an unprecedented situation. With a very short crop a greater number of bees must be fed to carry them over the coming winter than ever before. The extent of honey production in that region will be realized when it is said that there are 957 bee men registered in the one county of Los Angeles.

— : —

E. R. Root calls my attention to the part which Langstroth played in the development of the extractor. He devised one of the first machines used in this country and constructed a gearing to increase the speed of the reel.

A careful reading of the old magazines and bee books will reveal the fact that Langstroth was very active in everything of importance in the development of beekeeping as a practical business.

— : —

In 1914, Edward Kretchmer who was a pioneer Iowa beekeeper, told that in the early seventies he depended mostly upon prairie wild flowers for honey and that he had harvested honey from goldenrod, so thick that a table knife would stand upright in a bowl of it. Most of my life has been spent in the county next to the one where Kretchmer lived, yet I have never seen any appreciable amount of honey gathered from goldenrod. The explanation is that the prairie species disappeared with the breaking of the sod.

— : —

In 1872, H. A. Terry who also lived near to my Iowa home, wrote of the honey harvested from Giant Hyssop, yet that plant had disappeared from the region by the time I became interested in honey production. Apparently in most localities great changes have come to the bee pastures in the past sixty years.

Beekeeping has long been recognized as a quiet and peaceful pursuit. Virgil in his bee book written nearly two thousand years ago told how he sang of the tending of fields and flocks and trees "while great Caesar hurled war's lightnings by high Euphrates." * * * "Even in that season, I, Virgil, nurtured in sweet Parthenope, went in the flowery ways of lowly quiet."

— : —

My article on bee disease in the August Journal appears to have revived the old argument as to the relative merits of treatment or burning for American foulbrood. I had no such intention. My only object was to interest the government in the search for a control which might eventually do away with the need of using either one.

— : —

One inspector also regarded the article as a knock at the inspection system. Nothing was farther from my mind. What I tried to do was to point out that the best efforts of inspectors could only keep the disease in check and they needed the assistance of research workers in finding a remedy which might finally conquer the disease. Until a remedy is found inspection must go on.

— : —

Theresa E. DeVille, of Kransburg, S. D., reports that the ring neck pheasants have removed the necessity of spraying potatoes in South Dakota. The pheasants follow the rows and eat both young and old potato beetles. The suggestion is made that the Washington potato growers try introducing these birds to remove the necessity of spraying the potatoes and poisoning the bees. This is an interesting suggestion. Has anyone anything to add?

— : —

With reference to the strawberry code, Fred Mandary writes from Washington to say that picking was stopped only when the growers could no longer get the cost of gathering and crates. He states that a year's supply of berries were already in cold storage.

— : —

When we consider the object to give every man his fair place in the sun, we are inclined to get enthusiastic about the new deal, but when we see how hard it is to make the various experiments work we wonder how it will all come out.

— : —

Alfred H. Pering, of Dade City, Florida, writes that the reason the honeybee so often wins her argument is because she is successful in pressing her point.

— : —

Pering also sends along a clipping which conveys the information that a favorite dish in ancient Rome was made of peacock tongues, ostrich brains and honey. Some dish.

— : —

The new grandson thrives in spite of drouth and heat. He is unmindful of codes or strikes. There is no depression as far as he is concerned and his only protest is when dinner is late.

And now Henry Dadant is smiling because of a new granddaughter and Mrs. Lane, who is order clerk for the Journal, boasts of a similar distinction. There is every indication that the old world will be able to get along quite well without our assistance after we have lost our place in the line. Mother nature looks ahead.

— : —

A Minnesota correspondent inquires as to how much difference there is in the selling price of honey where the contents of the capping melter are added to the run from the extractor. The result is certainly darker honey and in some cases honey with a poorer quality. Much depends on the way the melter is handled. It is probably safer to keep the honey from the capping melter by itself rather than to reduce the quality of the whole by mixing it.

FRANK C. PELLETT.